5.17 Emissions Point 17 – No. 7 Tap Hole Fume Collector

5.17.1 Emissions Unit Description

Emissions from the slag-tapping and ESP dust oxidation from the No. 7 furnace are controlled by a cyclonic separator and venturi scrubber known as the tap hole fume collector (THFC).

Specifications

Stack Height:	96 feet
Stack Diameter:	3 feet
Stack Gas Flow Rate:	21,900 actual cubic feet per minute
Stack Temperature:	108 degrees F
Pressure Drop:	53 inches of water
Wet Scrubber Flow:	465 gallons per minute

5.17.2 Permit Requirement – Particulate Matter Limits - [OP No. 13-04200001-07, 7/18/79; IDAPA 58.01.01.702, 4/5/00]

5.17.2.1 Applicability

Operating Permit No. 13-0420-0001-07, issued July 18, 1979, limits particulate emissions from the No. 7 venturi stack to 0.2 pounds per ton of material fed to the furnace.

The permittee requested a streamlining of the operating permit particulate matter limit and the process weight limit (IDAPA 58.01.01.702). Streamlining means that only the most stringent limit shall apply. The operating permit limit of 0.2 pounds per ton is the most stringent below a process weight of 352,000 lbs/hour (176 T/hr). Above this process weight the process weight rate equation is more limiting. In a letter dated June 5, 2001, the permittee certified that the process was installed prior to October 1, 1979. Therefore, the applicable standard is IDAPA 58.01.01.702.

5.17.2.2 Compliance Demonstration

A particulate emission test shall be conducted on the No. 7 venturi stack every three years. The permit application states, "Testing will be performed to determine particulate emission rates from the No. 7 Tap Hole Fume Collector Stack every three years beginning in 1997, the No. 8 Tap Hole Fume Collector Stack every three years beginning in 1997, and the No. 9 Tap Hole Fume Collector Stack every three years beginning in 1997."

The No. 7 THFC was last tested in 2000. The emission rate measured during the source test was 1.75 lb/hr at a material throughput rate of 47.5 T/hr. Therefore, the allowable emission rate was 47.5 T/hr x 0.2 lb/T = 9.5 lb/hr. The allowable emission rate using the process weight rate equation is $1.12 (94{,}930)^{0.27} = 24.7$ lb/hr. The test was conducted at the following operating parameters:

Stack Temperature:	108 (degrees F, wet bulb)
Pressure Drop:	45 inches of water
Wet Scrubber Flow (1st stage):	291 gallons per minute
Wet Scrubber Flow (2nd stage):	230 gallons per minute

The permittee shall calculate the allowable emissions from the process and maintain records demonstrating compliance with the limit.

5.17.2.3 Monitoring

Once each week, the permittee will monitor the pressure drop across the scrubber, fan current, and fluid flow rate to the scrubber, as proposed on pages 97 and 106 of the application.

The permittee must maintain records of:

(a) The daily average hourly process weight rate; and

(b) The daily average calculated emission limitation using the 0.2 pound per ton emission limit if the process weight rate is less than 352,000 lb/hr. If the process weight rate is greater than 352,000 lb/hr the permittee shall calculate the hourly emission limitation using the formula in Permit Condition 17.1.

These records shall be maintained in accordance with Permit Condition 1.11.

5.17.2.4 Testing

In the application, P_4 Production proposed testing the No. 7 THFC once every three years beginning in 2003. The No. 7 THFC was last tested in 2000. However, P_4 Production requested in a letter dated May 1, 2001, to include the standard hierarchical testing schedule language that is based on a percentage of the allowable limit.

5.17.2.5 Recordkeeping

The permittee shall record the feed rate to the furnaces and the hours of operation per day. Once each month, the permittee will record the hours of operation for that month and for the previous consecutive 12-month period. Once each week, the permittee will record the pressure drop across the scrubber, the fan current, and the fluid flow rate to the scrubber, as proposed on pages 97 and 106 of the application.

5.17.2.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

5.17.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 17.2)

5.17.3.1 Applicability

IDAPA 58.01.01.625 applies to any point of emission.

5.17.3.2 Compliance Demonstration Method

P_4 Production shall conduct a routine inspection for visible emissions once per week.

5.17.3.3 Monitoring

In accordance with Permit Condition 1.8, the permittee shall conduct a weekly visible emissions inspection of Emissions Unit 17 during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source of visible emissions.

5.17.3.4 Testing

If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test.

5.17.3.5 Recordkeeping

The records shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

5.17.3.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c.

5.18 Emissions Point 18 – No. 8 Tap Hole Fume Collector

5.18.1 Emissions Unit Description

Emissions from slag-tapping and ESP dust oxidation from the No. 8 furnace are controlled by a cyclonic separator and venturi scrubber known as the No. 8 tap hole fume collector (THFC).

Specification

Stack Height:	118 feet
Stock Diameter:	3 feet
Stack Gas Flow Rate:	26,200 actual cubic feet per minute
Stack Temperature:	120 (degrees F)
Pressure Drop:	46 inches of water
Wet Scrubber Flow:	550 gallons per minute

5.18.2 Permit Requirement – Particulate Matter Limits - [OP No. 13-0420-0001-08, 7/18/79; IDAPA 58.01.01.702, 4/5/00]

5.18.2.1 Applicability

Operating Permit No. 13-0420-0001-08, issued on July 18, 1979, limits particulate emissions from the No. 8 venturi stack to 0.2 pounds per ton of material fed to the furnace.

The permittee requested a streamlining of the operating permit particulate matter limit and the process weight limit (IDAPA 58.01.01.702). Streamlining means that only the most stringent limit shall apply. The operating permit limit of 0.2 pounds per ton is the most stringent below a process weight of 352,000 lbs/hour. Above this process weight, the process weight rate equation is more limiting. In a letter dated June 5, 2001, the permittee certified that the process was installed prior to October 1, 1979. Therefore, the applicable standard is IDAPA 58.01.01.702.

5.18.2.2 Compliance Demonstration

A particulate emission test shall be conducted on the No. 8 venturi stack every three years. The permit application states, "Testing will be performed to determine particulate emission rates from the No. 7 Tap Hole Fume Collector Stack every three years beginning in 1997, the No. 8 Tap Hole Fume Collector Stack every three years beginning in 1997, and the No. 9 Tap Hole Fume Collector Stack every three years beginning in 1997." The No. 8 THFC was tested in 2000. The emission rate measured during the source test was 1.29 lb/hr at a material throughput rate of 52 T/hr. Therefore, the allowable emission rate was 52 T/hr x 0.2 lb/T = 10.4 lb/hr. The allowable emission rate using the process weight equation is $1.12 (105{,}950)^{0.27}$ = 25.4 lb/hr. The test was conducted at the following operating parameters:

Stack Temperature:	100 (degrees F, wet bulb)
Pressure Drop:	44 inches of water

Wet Scrubber Flow (1st stage): 250 gallons per minute
Wet Scrubber Flow (2nd stage): 207 gallons per minute

The permittee shall calculate the allowable emissions from the process and maintain records demonstrating compliance with the limit.

5.18.2.3 Monitoring

Once each week, the permittee will monitor the pressure drop across the scrubber, the fan current, and the fluid flow rate to the scrubber, as proposed on pages 97 and 106 of the application.

The permittee must maintain records of:

(a) The daily average hourly process weight rate; and

(b) The daily average calculated hourly emission limitation using the 0.2 pound per ton emission limit if the process weight rate is less than 352,000 lb/hr. If the process weight rate is greater than 352,000 lb/hr, the permittee shall calculate the hourly emission limitation using the formula in Permit Condition 18.1.

These records shall be maintained in accordance with Permit Condition 1.11.

5.18.2.4 Testing

In the application, P_4 Production proposed testing the No. 8 THFC once every three years beginning in 2003. The No. 8 THFC was tested in 2000. However, P_4 Production requested in a letter dated May 1, 2001, to include the standard hierarchical testing schedule language that is based on a percentage of the allowable limit.

5.18.2.5 Recordkeeping

The permittee shall record the feed rate to the furnaces and hours of operation. Once each month, the permittee will record the hours of operation for that month and for the previous consecutive 12-month period. Once each week, the permittee will record the pressure drop across the scrubber, the fan current, and the fluid flow rate to the scrubber, as proposed on pages 97 and 106 of the application.

5.18.2.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

5.18.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 18.2)

5.18.3.1 Applicability

IDAPA 58.01.01.625 applies to any point of emission.

5.18.3.2 Compliance Demonstration Method

P_4 Production shall conduct a routine inspection for visible emissions once per week.

5.18.3.3 Monitoring

In accordance with Permit Condition 1.8, the permittee shall conduct a weekly visible emissions inspection of Emissions Unit 18 during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source of visible emissions.

5.18.3.4 Testing

If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test.

5.18.3.5 Recordkeeping

The records shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

5.18.3.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c.

5.19 Emissions Point 19 – No. 9 Tap hole Fume Collector

5.19.1 Emissions Unit Description

Emissions from slag tapping and ESP dust oxidation from the No. 9 furnace are controlled by a cyclonic separator and venturi scrubber known as the No. 9 tap hole fume collector (THFC).

Specifications

Stack Height:	73 feet
Stack Diameter:	3.1 feet
Stack Gas Flow Rate:	25,000 actual cubic feet per minute
Stack Temperature:	113 (degrees F)
Pressure Drop:	50 inches of water
Wet Scrubber Flow:	600 gallons per minute

5.19.2 Permit Requirement – Particulate Matter Limits - [OP No. 13-0420-0001-09, 7/18/79; IDAPA 58.01.01.702, 4/5/00]

5.19.2.1 Applicability

Operating Permit No. 13-0420-0001-09, issued July 19, 1979, limits particulate emissions from the No. 9 venturi stack to 0.2 pounds per ton of material fed to the furnace.

The permittee requested a streamlining of the PTC particulate matter limit and the process weight limit (IDAPA 58.01.01.702). Streamlining means that only the most stringent limit shall apply. The PTC limit of 0.2 pounds per ton is the most stringent below a process weight of 352,000 lbs/hour. Above this process weight the process weight rate equation is more limiting. In a letter dated June 5, 2001, the permittee certified that the process was installed prior to October 1, 1979. Therefore, the applicable standard is IDAPA 58.01.01.702.

5.19.2.2 Compliance Demonstration

A particulate emission test shall be conducted on the No. 9 venturi stack every three years. The permit application states, "Testing will be performed to determine particulate emission rates from the No. 7 Tap Hole Fume Collector Stack every three years beginning in 1997, the No. 8 Tap Hole Fume Collector Stack every three years beginning in 1997, and the No. 9 Tap Hole Fume Collector Stack every three years beginning in 1997." The No. 9 THFC was sampled in 2000. The emission rate measured during the source test was 1.54 lb/hr at a material throughput rate of 66.8 T/hr. Therefore, the allowable emission rate was 66.8 T/hr x 0.2 lb/T = 13.4 lb/hr. The allowable emission rate using the process weight equation is $1.12\ (133{,}590)^{0.27}$ = 27.1lb/hr. The test was conducted at the following operating parameters:

Stack Temperature:	149 (degrees F, wet bulb)
Pressure Drop:	44 inches of water
Wet Scrubber Flow (1^{st} stage):	333 gallons per minute
Wet Scrubber Flow (2^{nd} stage):	194 gallons per minute

The permittee shall calculate the allowable emissions from the process and maintain records demonstrating compliance with the limit.

5.19.2.3 Monitoring

Once each week, the permittee will monitor the pressure drop across the scrubber, the fan current, and the fluid flow rate to the scrubber, as proposed on pages 97 and 106 of the application.

The permittee must maintain records of:

(a) The daily average hourly process weight rate; and

(b) The daily average calculated hourly emission limitation using the 0.2 pound per ton emission limit if the process weight rate is less than 352,000 lb/hr. If the process weight rate is greater than 352,000 lb/hr, the permittee shall calculate the hourly emission limitation using the formula in Permit Condition 19.1.

These records shall be maintained in accordance with Permit Condition 1.11.

5.19.2.4 Testing

In the application P_4 Production proposed testing the No. 9 THFC once every three years beginning in 2003. The No. 9 THFC was tested in 2000. However, P_4 Production requested in a letter dated May 1, 2001, to include the standard hierarchical testing schedule language that is based on a percentage of the allowable limit.

5.19.2.5 Recordkeeping

The permittee shall record the feed rate to the furnaces and hours of operation. Once each month, the permittee must record the hours of operation for that month and for the previous consecutive 12-month period. Once each week, the permittee will record the pressure drop across the scrubber, the fan current, and the fluid flow rate to the scrubber, as proposed on pages 97 and 106 of the application.

5.19.2.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

5.19.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 19.2)

5.19.3.1 Applicability

IDAPA 58.01.01.625 applies to any point of emission.

5.19.3.2 Compliance Demonstration Method

P_4 Production shall conduct a routine inspection for visible emissions once per week.

5.19.3.3 Monitoring

In accordance with Permit Condition 1.8, the permittee shall conduct a weekly visible emissions inspection of Emissions Unit 19 during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source of visible emissions.

5.19.3.4 Testing

If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test.

5.19.3.5 Recordkeeping

The records shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

5.19.3.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c.

5.20 Emissions Point 20 – Phosphorus Storage

5.20.1 Emissions Unit Description

The following requirements apply generally to the phosphorus storage and loading operations, which includes the phosphorus loading leg and phosphorus loading sump.

5.20.2 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625.02] (Permit Condition 20.1)

5.20.2.1 Applicability

Liquid phosphorous loading operations, if operating prior to January 24, 1969, are exempt from the requirements in IDAPA 58.01.01.625 that limit visible emissions to 20% opacity. In accordance with IDAPA 58.01.01.625.02, sources exempted from the provisions of IDAPA 58.01.01.625 shall not discharge into the atmosphere from any point of emission, for any air pollutant for a period or periods aggregating more than three minutes in any 60-minute period that is greater than 40% opacity.

5.20.2.2 Compliance Demonstration Method

A weekly visible emissions inspection will be conducted on the phosphorus loading leg, phosphorus loading sump, and CO phos trap seal pot. The seal pots, except for the CO phos trap seal pot, are now controlled by the tap hole fume collectors as a result of the Corrective Action Plan. The opacity limit from the tap hole fume collectors is 20% and they have their own visible emissions monitoring requirements so specific monitoring and recordkeeping for the seal pots to demonstrate compliance with the 40% opacity standard is not required.

5.21 Emissions Point 21 - No. 7 & No. 8 CO Flare

5.21.1 Emissions Unit Description

The No. 7 & No. 8 CO flare is the primary emission point of furnaces No. 7 and No. 8. Each furnace has an electrostatic precipitator (treater) and spray tower to control particulate emissions before the furnaces are ducted together. The CO is either burned at the flare or ducted to the kiln to be used as fuel.

In the main process in the Furnace Department, elemental phosphorus is produced in one of three electric arc furnaces (No. 7, No. 8, and No. 9) by a thermal reaction of the furnace feed "burden" (a mixture of quartzite, coke, and calcined phosphate ore). Coke fines are injected into the furnace while all other burden is gravity-fed into the furnaces from the overhead bins through feed chutes. Once in the furnace, the burden reacts to evolve CO and phosphorus gases through the vent riser. The gaseous emissions from the furnace pass through an electrostatic precipitator and a dust knockout chamber to remove particulates. These particulates, also known as treater dust, are transported in pans to an area where they are cooled prior to dumping into a stockpile. The CO gas that is evolved during the furnace process is separated from the phosphorus gas at the furnace gas condenser (spray tower). Once segregated from the phosphorus gas stream, the CO gas is used as a fuel source in the beneficiation process (kiln). Excess CO is burned off by flare. Condensed phosphorus is collected under water in collection tanks and dumped to the phos-dock, which consists of several storage tanks partially filled with water.

Other byproducts of the furnace process are ferrophosphorus and slag (calcium silicate), which are tapped from the furnaces in the molten state. Ferrophosphorus is cooled in receiving pots while molten slag is dumped on the slag pile and allowed to cool.

Specifications

No. 7 and No. 8 Flare

Stack Height:	44.8 meters
Stack Diameter:	0.61 meters
Estimated annualized composite flow rate:	77.76 cubic meters per second

No. 7 Electrostatic precipitator

Pressure Drop:	0.5 inches of water

No. 7 Spray Tower

Pressure Drop:	2.4 inches of water
Spray Flow Rate:	608 gallons per minute

No. 8 Electrostatic precipitator

Pressure Drop:	0.5 inches of water

No. 8 Spray Tower

Pressure Drop:	2.4 inches of water
Spray Flow Rate:	608 gallons per minute

5.21.2 Permit Requirement – Particulate Matter Standard for Incinerators - [IDAPA 58.01.01.785, 5/1/94] (Permit Condition 21.1)

5.21.2.1 Applicability

The purpose of IDAPA 58.01.01.785 through .788 is to prevent excessive emissions of particulate matter from incinerators. According to the definition of "incinerator" in IDAPA 58.01.01.006.51, the destruction of any combustible liquid or gaseous material by burning in a flare stack shall be considered incineration.

IDAPA 58.01.01.700, Process Weight Limitations, does not apply to a flare because a flare is defined as an incinerator per IDAPA 58.01.01.006.51, not process equipment.

IDAPA 58.01.01.710.08 does not apply to sources subject to the particulate matter emissions standard listed in IDAPA 58.01.01.786.

5.21.2.2 Compliance Demonstration Method

A standard Method 5 particulate test on the flare outlet is not possible due to high temperatures and a lack of stack above the flame. Therefore, particulate matter testing to actually demonstrate compliance with the standard is not possible. Weekly opacity monitoring will be used as a surrogate for monitoring particulate matter emissions. Using the No. 7/8 flare design rate, 53,136 lb CO/hr wet basis, this would calculate to a particulate matter limit of 106.3 lb/hr. The design rate was submitted in P_4's comments on the facility draft.

5.21.2.3 Monitoring

The permittee must monitor the following parameters:

(a) The voltage and amperage to the No. 7 and No. 8 ESP;

(b) The fluid flow rates through the scrubber,

(c) Scrubber off-gas temperature; and

(d) The pounds per hour of refuse burned in the flare.

P_4 suggested monitoring the scrubber off-gas temperature in the comments on the facility draft permit. According to P_4, performance of the precipitators has a very small impact on overall particulate emissions due to the spray tower being the primary step in the process, which reduces phosphorus in the off-gas.

5.21.2.4 Testing

Opacity will be monitored weekly as a surrogate for particulate matter testing. A thermal oxidizer will likely replace the flare within the next few years as a result of the compliance plan for the No. 7 and No. 8 flare that is included in the permit (Section 25).

5.21.2.5 Recordkeeping

The permittee must maintain records of all required monitoring data.

5.21.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 21.2)

5.21.3.1 Applicability

The No. 7 and No. 8 CO flare is a point source that has exceeded 20% opacity in the past.

5.21.3.2 Compliance Demonstration Method

The permittee will conduct an opacity test once each week.

5.21.3.3 Testing

The permittee will conduct an opacity test once each week.

5.21.3.4 Recordkeeping

The permittee shall record the results of the weekly opacity test.

5.21.3.5 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

5.22 Emissions Point 22 - No. 9 CO Flare

5.22.1 Emissions Unit Description

The No. 9 CO flare is the primary emission point of furnace No. 9. The furnace has an electrostatic precipitator (treater) and spray tower to control particulate emissions before the CO is burned at the flare or ducted to the kiln.

Specifications

No. 9 CO Flare

Stack Height:	48.6 meters
Stack Diameter:	0.61 meters
Stack Gas Flow Rate:	55.75 cubic meters per second

No. 9 Electrostatic precipitator

Pressure Drop:	0.5 inches of water

No. 9 Spray Tower

Pressure Drop:	1.9 inches of water
Spray flow:	249 gallons per minute

5.22.2 Permit Requirement – Particulate Matter Standard for Incinerators - [IDAPA 58.01.01.785, 5/1/94] (Permit Condition 22.1)

5.22.2.1 Applicability

The purpose of IDAPA 58.01.01.785 through .788 is to prevent excessive emissions of particulate matter from incinerators. According to the definition of "incinerator" at IDAPA 58.01.01.006.51, the destruction of any combustible liquid or gaseous material by burning in a flare stack shall be considered incineration.

IDAPA 58.01.01.700, Process Weight Limitations, does not apply to a flare because a flare is defined as an incinerator per IDAPA 58.01.01.006.51,or refuse-burning equipment, not process equipment.

IDAPA 58.01.01.710.08 does not apply to sources subject to the particulate matter emissions standard listed in IDAPA 58.01.01.786.

5.22.2.2 Compliance Demonstration Method

A standard Method 5 particulate test on the flare outlet is not possible due to high temperatures and a lack of stack above the flame. Therefore, particulate matter testing to actually demonstrate compliance with the standard is not possible. Using the No. 9 flare design rate, 35,425 lb CO/hr on a wet basis, this would calculate to a particulate limit of 70.85 lb/hr. The design rate was submitted by P_4 in their comments on the facility draft permit. According to the Corrective Action plan submitted by P_4, the No. 9 flare is rarely used anymore because the excess CO is ducted to the kiln.

5.22.2.3 Monitoring

The permittee must monitor the following parameters:

(a) The voltage and amperage to the No. 9 ESP;

(b) The fluid flow rates through the scrubber;

(c) The scrubber off-gas temperature;

(d) The average pounds per hour of refuse (CO) burned in the flare;

(e) The average pounds per hour of CO flow to the kiln;

(f) The operation of the phosphorus trap;

(g) The operation of the CO flow monitors; and

(h) The thickness of the CO piping.

Parameters (e) through (h) are from the #9 CO Flare corrective action plan. P_4 suggested monitoring the scrubber off-gas temperature in the comments on the facility draft permit. According to P_4, performance of the precipitators has a very small impact on overall particulate emissions due to the spray tower being the primary step in the process, which reduces phosphorus in the off-gas.

5.22.2.4 Testing

Opacity will be monitored weekly as a surrogate for particulate matter testing.

5.22.2.5 Recordkeeping

The permittee must maintain records of all required monitoring data.

5.22.2.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

5.22.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 22.2)

5.22.3.1 Applicability

The No. 9 CO flare is a point source that has exceeded 20% opacity in the past. The permittee has instituted a program to burn more of the CO in the kiln so the flare will operate at a lower load, but the possibility of exceeding the opacity standard still exists.

5.22.3.2 Compliance Demonstration Method

As part of the corrective action plan submitted to demonstrate compliance with the opacity standard, P_4 Production provided some operational procedures and monitoring that will be conducted to ensure a maximum amount of CO is burned in the kiln rather than flared. In an attempt to prevent any restrictions or failures in the CO piping, an annual thickness profile of the CO piping will be completed and long-term trends in CO piping temperatures will be monitored.

The phosphorous traps are located at the low point of the CO piping and are designed to remove water and phosphorous from the CO gas stream. Improper operation or equipment failures in the traps can cause reduced CO flow. Therefore, a walkthrough of the traps will be conducted every shift.

The CO flow to the kiln will be monitored to identify any unexplained declining trends. A weekly check of the CO flow meter to the kiln will also be conducted.

5.22.3.3 Monitoring

Once each shift, the permittee will monitor the operation of the phosphorous traps and CO flow meter to the kiln. The permittee will monitor the thickness of CO piping annually.

5.22.3.4 Testing

The permittee will conduct an opacity test once each week.

5.22.3.5 Recordkeeping

Once each week, the permittee shall record the results of the opacity test. The permittee must also maintain records of all required monitoring data.

5.22.3.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

5.23 Emissions Point 23 - Natural Gas-Fired Boiler

5.23.1 Emissions Unit Description

The emissions unit consists of a 64.6 million British thermal units per hour (MMBtu/hr) natural gas-fired boiler.

Specifications

Stack Height:	41 feet
Stack Diameter:	3.4 feet
Gas Flow Rate:	3600 actual cubic feet per minute

5.23.2 Permit Requirement – Particulate Matter Standard for Fuel-burning Equipment - [IDAPA 58.01.01.677] (Permit Condition 23.1)

5.23.2.1 Applicability

In accordance with the permittee's application, the standards for minor and existing fuel-burning sources are applicable to the natural gas-fired boiler.

Particulate matter emissions shall not exceed the grain-loading emission limits of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for natural gas.

5.23.2.2 Compliance Demonstration

It is proposed that compliance with the particulate matter standard be assumed provided that only natural gas is combusted. According to AP-42, Permit Condition 1.4, approximately 7.6 pounds of particulate is generated per million cubic feet ($lb/10^6$ scf) of natural gas combusted in 10-100 MMBtu/hr boilers. Also, according to 40 CFR 60, Appendix A, Method 198, approximately 8710 dscf of flue gas at standard conditions (68° F, 29.92 inches of mercury [Hg]) is created per million BTUs of natural gas. This data is used in the following steps to demonstrate that particulate emissions from the combustion of natural gas will always be less than the particulate matter standard of 0.015 gr/dscf.

To correct the flue gas volume:

For an altitude of 5500 feet, the altitude of Soda Springs (per IDAPA 58.01.01.680):
Subtract 0.10 x 55.00 = 5.500 inches Hg from standard atmospheric pressure at sea level
29.92 inches Hg – 5.500 inches Hg = 24.42 inches Hg
2) Using the Ideal Gas Law and knowing that n, R, and T will be the same,

$$V_2 = \frac{P_1 V_1}{P_2} \qquad (5.1)$$

where,
V_2 = the gas volume corrected for altitude,
V_1 = the known gas volume (8710 dscf),
P_1 = the pressure of the known gas volume (29.92 inches Hg)
P_2 = the pressure of the corrected gas volume (25.42 inches Hg).

The altitude corrected volume (V_2) of the flue gas is 10670 dscf.
For 3% oxygen:
using a standard correction ratio as presented in 40 CFR 60, Appendix A, Method 19,

$$F_2 = F_1 \times \frac{20.9}{20.9 - 3.0} \qquad (5.2)$$

where,
F_2 = the gas volume corrected to 3% oxygen,
F_1 = the altitude corrected flue gas volume (10,670 dscf) as calculated in Equation (5.1).

The oxygen and altitude corrected volume (F_2) of the flue gas is 12,460 dscf per million Btu of natural gas.

3) Determine the volume of flue gas created by the combustion of one million cubic feet of natural gas:

$$10^6 \text{ feet}^3 \times 1{,}050 \text{ Btu/feet}^3 \times 12{,}460 \text{ dscf}/10^6 \text{ Btu} = 13.1 \times 10^6 \text{ dscf} \quad (5.3)$$

4) Determine the grain-loading per cubic foot of flue gas:

$$7.6 \text{ lb PM} \times 7{,}000 \text{ gr/lb} \times 1/13.1 \times 10^6 \text{ dscf} = 0.004 \text{ gr/dscf} < 0.015 \text{ gr/dscf} \quad (5.4)$$

Emission factors given in AP-42 are generally accepted as conservative estimates. Even a conservative estimate of emissions from natural gas combustion results in an approximated grain-loading well below the standard of 0.015 gr/dscf. Therefore, as long as the permittee is in compliance with Permit Condition 24.4, the permittee is in compliance with the grain-loading standard.

The permittee shall remain in compliance with reporting requirements under the Facility-wide Conditions and General Provisions of the permit.

5.23.2.3 Monitoring

None required.

5.23.2.4 Testing

None required.

5.23.2.5 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c.

5.23.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 23.2)

5.23.3.1 Applicability

IDAPA 58.01.01.625 applies to any point of emission.

5.23.3.2 Compliance Demonstration Method

P_4 Production shall conduct a routine inspection for visible emissions once per week.

5.23.3.3 Monitoring

In accordance with Permit Condition 1.8, the permittee shall conduct a weekly visible emissions inspection of Emissions Unit 23 during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source of visible emissions.

5.23.3.4 Testing

None required.

5.23.3.5 Recordkeeping

The records shall, at a minimum, include the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

5.23.3.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c.

6. *INSIGNIFICANT ACTIVITIES*

Insignificant activities submitted by the permittee are listed in the permit. The activities were reviewed by DEQ and found to be insignificant in accordance with IDAPA 58.01.01.317.01(b).

The vactor truck was added to the list of insignificant activities since it is process equipment used to remove accumulated dust from the baghouses.

The lime silo is a presumptively insignificant activity in accordance with IDAPA 58.01.01.317.01.a.i (95), even though it is controlled by a baghouse.

7. *COMPLIANCE PLAN AND COMPLIANCE CERTIFICATION*

Pursuant to the information submitted by P_4 Production in the October 16, 1998 Tier I operating permit (Tier I) application, P_4 Production has not obtained permits to construct (PTCs) for construction and/or modification of all emission sources at the facility in accordance with IDAPA 58.01.01.200 through 223. The following sources were specifically identified that were required to, but did not obtain, a PTC:

- No. 7 hearth replacement (1994)
- No. 7 furnace transformer replacement (1989)

In addition, the permittee has the continuing responsibility to submit any supplementary information needed, including information for any other sources, in accordance with IDAPA 58.01.01.315.

Because these sources have been constructed and/or modified without a permit, the Department has determined that the most appropriate course of action to bring the facility into compliance with the requirements is to issue a single facility-wide permit that:

(a) Specifically establishes the operating terms and conditions required by the PTC rules for sources for which a permit was required but not obtained; and

(b) Collectively addresses the operating terms and conditions required to demonstrate that emissions from all sources at the facility will not contribute to the violation of an applicable standard.

The Department is, therefore, requiring a combined Tier II operating permit (Tier II) and PTC (hereafter referred to as the facility-wide permit). The Tier II for P_4 Production is required in accordance with IDAPA 58.01.01.401.03 based on the determination that specific emission standards, or requirements on operation or maintenance are necessary to ensure compliance with any applicable emission standard or rule. The facility-wide permit will contain the terms and conditions necessary for the facility to comply with the applicable requirements of IDAPA 58.01.01.400 through 410.

The facility-wide permit will also include all of the terms and conditions for new or modified sources. For those sources within the facility that have existing PTCs, the terms and conditions will be incorporated into the new permit. For sources at the facility for which a PTC was required but not obtained, the permit will establish new emission limits, controls, and other requirements in accordance with the applicable portions of IDAPA 58.01.01.200 through 223. The new facility-wide permit will address all applicable emission standards, required emission control technology, and demonstrate that the facility will not cause or contribute to any ambient air quality standard or applicable prevention of significant deterioration (PSD) increment.

The combined Tier II and PTC is different than, and separate from, the Tier I in that the new permit will establish new applicable emission limits, controls, and other requirements that are as stringent as the requirements contained in or enforceable under the state implementation plan. This permit will create new underlying requirements for sources that are in existence at the time the initial Tier I is issued. A Tier I permit modification will, therefore, need to be issued concurrently with the issuance of the new facility-wide permit.

The applicable requirements established in the facility-wide permit pursuant to IDAPA 58.01.01.200 through 223 shall be clearly identified as such in the permit and shall remain in full force and effect until such time as they are modified or terminated in accordance with the procedures for issuing a PTC.

The specific compliance schedule elements and milestones to achieve compliance are described below.

Permit Condition 25.2. The permittee will be required to submit a complete permit application with all supporting information and documentation for issuance of a facility-wide permit in accordance with IDAPA 58.01.01.400 through 410 no later than 180 days from the final issuance date of the Tier I. P4 is allowed the entire 180 days to submit the required permit application. The Departments 30-day completeness determination process will commence either upon submittal of the permit application on the 180th day, or earlier if P4 submits the application before the 180th day. The Department insists the term "complete" be retained so the application is not submitted piecemeal. A facility-wide permit is required by the Department to establish the terms and conditions necessary to comply with an applicable rule or standard. The Department shall consider the emissions from all sources at the facility and the specific requirements for individual sources in preparing the facility-wide operating permit.

The permit application shall clearly identify all emissions units at the facility - listing currently permitted emissions units, exempted units for which the facility maintains exemption documentation, units constructed before and not modified since January 24, 1969, and units constructed and/or modified since January 24, 1969 without a permit or construction approval from the Department. Application information shall provide facility information and emissions data for all emissions units in accordance with IDAPA 58.01.01.402 and 403 and shall include a demonstration that the sources at the facility will not cause or significantly contribute to a violation of the NAAQS or of any applicable PSD increment.

The application submittal deadlines have been set to reasonably accommodate updating and organizing the emissions unit descriptions and emissions data, and conducting ambient air quality modeling for all sources. Applications that are deemed or remain incomplete beyond the 180-day milestone shall constitute a violation of this permit condition.

Permit Condition 25.3. In addition to the information submitted under Permit Condition 25.2, the permittee is required to submit all of the information necessary to address the applicable requirements for PTCs in accordance with IDAPA 58.01.01.200 through 223 and the NSPS requirements in 40 CFR 60, Subpart KB for the construction and/or modification of sources for which the permittee was required but did not obtain a PTC. The information must include all information to address the additional permit requirements for new major facilities or major modifications where construction without enforceable limits may have triggered PSD or nonattainment new source review (NSR) requirements.

This data must be submitted with the complete permit application required under Permit Condition 25.2 in order to issue a single combined permit. The information is, therefore, due no later than 180 days from the final issuance date of the Tier I. Failure to include complete information for addressing the PTC requirements within the required timeframe shall constitute a violation of this permit condition.

Permit Condition 25.4. If through the development of the facility-wide permit, any other source or sources are identified that should have obtained a PTC or PTC modification and for which the applicant did not include the information under Permit Condition 25.3, a supplemental application that contains all of the information necessary to address the applicable requirements for PTCs in accordance with IDAPA 58.01.01.200 through 223 shall be submitted no later than 30 days after receiving written notification from the Department. Supplemental applications that are deemed or remain incomplete beyond the 30-day milestone shall constitute a violation of this permit condition.

Permit Condition 25.5. If the permittee can clearly demonstrate that the data required for the facility-wide permit cannot be collected and organized within the specified timeframe, the permit application submittal deadlines may be extended at the discretion of the Department for a specific time period not to exceed one year. For the Department to consider a request for an extension without jeopardizing the terms and conditions of the permit, the request must be submitted by the facility no later than the midpoint of the compliance milestone timeline. The request must be submitted in writing with a clear demonstration why the data cannot reasonably be submitted within the specified timeframe. An example of information that might justify an extension is the absence of ambient monitoring data required to complete a PSD application.

The Department will review the request and the justification and approve or disapprove the extension in writing. The responsibility for meeting the schedule if the Department has not issued a written extension belongs to the permittee.

Permit Condition 25.6. The Department intends to draft and issue a single facility-wide permit to bring the permittee back into compliance. This permit will fully meet all of the applicable requirements in the *Rules* and the federally approved state implementation plan. Because the permit will contain both elements of PTCs and of Tier II permits, it will clearly identify the origin and basis for each term and condition. The terms and conditions established pursuant to the PTC requirements shall be clearly marked and shall not expire with any Tier II operating permit term. The terms and conditions established pursuant to the Tier II requirements shall be clearly marked and shall be implemented in accordance with the Tier II process. The procedures for issuing a PTC in IDAPA 58.01.01.209 shall be followed concurrently with the procedures for issuing a Tier II in IDAPA 58.01.01.404. The permit shall clearly state that any future modification of a term or condition in the permit shall be subject to the appropriate procedural requirements on which the original term or condition was based.

Permit Condition 25.7. Within 30 days after the Department determines the facility-wide permit application complete, the permittee will need to request a significant permit modification to the Tier I in accordance with IDAPA 58.01.01.382.02. A significant Tier I modification will require the payment of fees in accordance with IDAPA 58.01.01.389.06.b.iii. Because the information in a complete application as required under Permit Condition 25.2 and 25.3 should contain all of the technical information necessary to modify the Tier I, the Department may waive portions of the standard application requirements as appropriate provided the permittee certifies the completeness, truth, and accuracy of all documents submitted.

The Tier I modification shall be processed concurrently with the facility-wide permit in accordance with the procedures for issuing a Tier I in IDAPA 58.01.01.360 through 369.

Permit Condition 25.8. The permittee shall be required to submit a progress report at the end of each calendar quarter (January 1, April 1, July 1, and October 1) of each year stating when each of the conditions of each milestone were or will be achieved. A detailed explanation is required when milestones were not or will not be achieved in accordance with the schedule.

Permit Condition 25.9. The incorporation of the compliance schedule into the Tier I operating permit does not sanction noncompliance with the applicable rules.

7.1 Tap Hole Fume Collection Systems Compliance Schedule

Compliance with the opacity standard and permitted particulate limit was demonstrated during 1998 for the No. 9 THFC. P_4 Production certified compliance for the No. 9 THFC on April 22, 1998. The No. 7 and No. 8 THFC upgrades were installed in 1999. Stack sampling occurred October 18-20, 1999, with opacity observations taken while sampling. P_4 Production certified compliance for the No. 7 THFC stack and the No. 8 THFC stack on December 21, 1999. Full compliance for the tap hole fume collection systems has been demonstrated.

7.2 Furnace CO Flare Systems Compliance Schedule

Compliance of the No. 9 CO flare (Emissions Unit 22) was demonstrated in March 2000. The compliance schedule for demonstrating compliance with the 20% opacity requirement for the No. 7 & No. 8 CO flare (Emissions Unit 21) is included in the consent order referenced in the permit at Condition 25.10 .

7.3 Tank Seal Pot Systems Compliance Schedule

P_4 Production certified compliance with the 20% opacity standard for the tank seal pot system (Emissions Unit 20) on December 30, 1998. Full compliance for the tank seal pot system has been demonstrated.

7.4 SDM Conveyor System Compliance Schedule

P_4 Production certified compliance for the SDM conveyor system (Emissions Unit 16) on August 5, 1996. Full compliance for the SDM conveyor system has been demonstrated.

7.5 Coke And Quartzite Handling Dust Control Compliance Schedule

P_4 Production certified compliance with the reasonable control of fugitive emissions standard for the coke and quartzite handling dust control system (Emissions Unit 6) on March 31, 1997, after replacing three belts with one to reduce transfer points and installing pleated bags in the coke and quartzite baghouse. Full compliance for the coke and quartzite handling dust control system has been demonstrated.

7.6 No. 8 Furnace Explosion Seal Stack Compliance Schedule

P_4 Production certified compliance for the No. 8 explosion seal (Emissions Unit 21) on August 5, 1996. Full compliance for the No. 8 furnace explosion seal stack has been demonstrated.

7.7 Compliance Certification

A compliance certification shall be submitted by P_4 Production on an annual basis. The first annual compliance certification is due within 60 days, or March 1st of the end of the calendar year the permit is issued and annually thereafter.

8. OPERATIONS AND MAINTENANCE MANUAL

The Operations and Maintenance Manual is an applicable requirement from the 1979 operating permit No. 13-0420-001-01. General Provision H of that permit made the manual part of the permit by reference. The General Provision is included in this Tier I operating permit at Permit Condition 25.28. The manual is included in the permit along with the updated audit report forms.

9. REGISTRATION FEES

This facility is a major facility as defined by IDAPA 58.01.01.008.10; therefore, registration and registration fees, in accordance with IDAPA 58.01.01.387, apply.

10. AEROMETRIC INFORMATION RETRIEVAL SYSTEM (AIRS) FACILITY SUBSYSTEM

AIRS/AFS FACILITY-WIDE CLASSIFICATION DATA ENTRY FORM

AIR PROGRAM / POLLUTANT	SIP	PSD	NSPS (Part 60)	NESHAP (Part 61)	MACT (Part 63)	TITLE V	AREA CLASSIFICATION A – Attainment U – Unclassifiable N - Nonattainment
SO_2	A	A				A	A
NOx	A	A				A	A
CO	A	A				A	A
PM_{10}	A	A				A	A
PT (Particulate)	A	A				A	A
VOC	B						A (Ozone)
Radionuclides				X			
Antimony	A					A	
Arsenic	A					A	
Asbestos	A					A	
Beryllium	A					A	
Cadmium	A					A	
Chromium	A					A	
Cobalt	A					A	
Fluorides	A	A				A	
H_2S	B						
Lead	A					A	
Manganese	A					A	
Mercury	A					A	
Nickel	A					A	
Phosphine	A					A	
Phosphorus	A					A	
Selenium	A					A	
THAP (Total HAPs)	A					A	
			APPLICABLE SUBPART K				

AIRS/AFS CLASSIFICATION CODES:

A = Actual or potential emissions of a pollutant are above the applicable major source threshold. For NESHAP only, class "A" is applied to each pollutant which is below the 10 ton-per-year (T/yr) threshold, but which contributes to a plant total in excess of 25 T/yr of all NESHAP pollutants.

SM = Potential emissions fall below applicable major source thresholds **if and only if** the source complies with federally enforceable regulations or limitations.

B = Actual and potential emissions below all applicable major source thresholds.

C = Class is unknown.

ND = Major source thresholds are not defined (e.g., radionuclides).

11. RECOMMENDATION

Based on the Tier I operating permit application and review of the federal regulations and state rules, staff recommends DEQ issue final Tier I operating permit No. 029-00001 to P4 for their facility in Soda Springs.

Appendix A

40 CFR 61 Subpart A Applicability

SECTION	DESCRIPTION	APPLICABILITY DETERMINATION	PERMIT ACTION
61.01	Lists of pollutants and applicability of part 61	Yes P_4 emits radionuclides.	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.02	Definitions	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.03	Units and abbreviations	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.04	Address	Yes, except 61.04(b) because Idaho has not been delegated authority to implement and enforce the NESHAPs	All submittals and communications pursuant to the part must be submitted in duplicate to EPA Region X.
61.05	Prohibited activities	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.06	Determination of construction or modification	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.07	Application for approval of construction or modification	Yes	Not included in permit because this requirement applies even if a permit is not issued.
61.08	Approval of construction or modification	Yes	No permit action required because this section defines the Administrator's actions, not the source's actions.
61.09	Notification of startup	No, the initial startup of P_4's kiln was before the effective date of the standard so initial notification is not required	
61.10	Source reporting and waiver request	See below	
61.10(a)	Notification of startup	No, sources designated under subpart K are exempt from the reporting requirements of 61.10 (61.127)	
61.10(b)	Request for waiver of standard for a period not to exceed 2 years after the effective date	No, the effective date for the standard was Dec. 19, 1991, so the waiver is no longer available	
61.10(c)	Update notification information	No, sources designated under subpart K are exempt from the reporting requirements of 61.10 (61.127)	
61.10(d)	Possible reporting format	No, sources designated under subpart K are exempt from the reporting requirements of 61.10 (61.127)	
61.10(e)	Time periods specified as days shall be measured as calendar days	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.

SECTION	DESCRIPTION	APPLICABILITY DETERMINATION	PERMIT ACTION
61.10(f)	Postmark deadlines	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.10(g)	Time periods or deadlines may be changed by mutual agreement	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.10(h)	Deadlines for reporting to states	No	Idaho has not been delegated authority for the part.
61.10(i)	Common schedule for report submittal	No, sources designated under subpart K are exempt from the reporting requirements of 61.10 (61.127)	
61.10(j)	Time period adjustment	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.11	Waiver of compliance in accordance with request under 61.10	No, the waiver is only available for 2 years after the effective date of the subpart. The effective date for Subpart K was more than 2 years ago.	
61.12	Compliance with standards and maintenance requirements	See below	
61.12(a)	Compliance with numerical emission limits	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.12(b)	Compliance with design, equipment, work practice, or operational standards shall be determined as specified in and individual subpart	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.12(c)	Each stationary source shall be maintained and operated in a manner consistent with good air pollution control practice	Yes	Included in permit.
61.12(d)	Alternative means of emission limitation	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.12(e)	Use of credible evidence	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.

SECTION	DESCRIPTION	APPLICABILITY DETERMINATION	PERMIT ACTION
61.13	Emission tests and waiver of emission tests	See below	
61.13(a)	Requirement for initial source testing	No, obsolete, initial source testing has been completed	
61.13(b)	Administrator may require source testing under section 114 of the Clean Air Act	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.13(c)	Notify Administrator 30 days before emission test	Yes	Included in permit.
61.13(d)	Provide emission testing facilities	Yes	Included in permit.
61.13(e)	Emission testing conditions specified by the Administrator	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.13(f)	Emission test submittal date	No, emission test submittal is specified in subpart K	
61.13(g)	Retain emission test results for 2 years	Yes	Not included in the permit because Tier I rules require records to be kept for 5 years.
61.13(h)	Changes to emission test methodology and emission test waivers	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.13(i)	Emission test waivers	Yes, P_4 has been granted a waiver from emission testing	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.14	Monitoring requirements	See below	
61.14(a)	Section applies to monitoring systems required under each subpart	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.14(b)	Maintain and operate monitoring system in a manner consistent with good air pollution control practice	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.14(c)	Administrator may require a performance evaluation of the monitoring system	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.14(d)	Monitoring of combined effluents from different sources	Not applicable at this time because P_4 does not have combined effluents from the kiln, but may become applicable at a later date if effluents are combined	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.14(e)	Reduce monitoring data	Yes	Included in permit.
61.14(f)	Owner shall maintain monitoring data	Yes	Included in permit, although records are required to be kept for 5 years in accordance with IDAPA 58.01.01.322.07.c, rather than the 2

SECTION	DESCRIPTION	APPLICABILITY DETERMINATION	PERMIT ACTION
			years specified in 61.14(f).
61.14(g)	Changes to monitoring requirements	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.15	Modification	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.16	Availability of information	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.17	State Authority	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.18	Incorporation by reference	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.
61.19	Circumvention	Yes	No permit action required because this section only provides information about the regulations instead of specifying a specific requirement that needs to be included in the permit.

Appendix B

EPA Region X Letter, Annual Emission Test Waiver

RECEIVED
AUG 1 1996

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

JUL 2 9 1996

bcc: E.N.Elroy
R.C.Lowe
R.L.Simmons
J.P.Hyland-F2EB
D.R.Wind
Env'l Contact File No. 1101
File: Kiln Radionuclides

Reply to
Attn. of: OAQ-107

Bruce E. Pallante, Plant Manager
Monsanto
The Chemical Group
Post Office Box 816
Soda Springs, Idaho 83276

Dear Mr. Pallante:

This is in response to your letter to Anita Frankel dated June 28, 1996, concerning the annual emission testing required in Section 61.123 of Title 40 of the Federal Regulations (40 C.F.R. §61.123).

Based on the information in that letter, and that submitted with your past annual reports, I have determined that the data are sufficient to demonstrate the continuing compliance of the plant, in its current operating condition, with the standard in 40 C.F.R. §61.122. In accordance with 40 C.F.R. §61.123(a), I permanently waive the annual emission testing requirements of that section.

Please note that any physical or operational change to the plant which could reasonably be expected to increase emissions may cause the plant to be considered a new source under the rule, and thereby cause reinstatement of the requirement for emission testing.

If you have any questions regarding this waiver, please call Anita Frankel, Director Office of Air Quality, at (206) 553-2963, or Jerry Leitch at (206) 553-7660 for technical matters.

Sincerely,

Chuck Clarke

Chuck Clarke
Regional Administrator

cc: Orville Green, IDEQ
Rick Elkins, IDEQ

Appendix C

Response to Comments

Draft Tier I Operating Permit Comments
P4 Production, LLC
Soda Springs, Idaho

The public comment period on this permit commenced on April 18, 2002, and concluded on May 20, 2002. These comments were received on May 24, 2002, and are therefore untimely. The Department, in its discretion, has determined to respond to these comments despite their untimely submission. By responding to these comments the Department does not waive and expressly reserves any and all legal rights and defenses it may possess related to said comments including any and all rights pursuant to the Idaho Administrative Procedures Act, Idaho Code §67-5200 et seq. and IDAPA 58.01.23, "Rules of Administrative Procedure Before the Board of Environmental Quality".

General Comments

1. Ambient Air Quality Monitoring Requirements: ***P4 requests the removal of Requirements 1.20 through 1.20.3.*** The Draft Permit includes a section, Ambient Air Quality Monitoring Requirements, in Section 1, Facility Wide Conditions. Requirements 1.20 through 1.20.3 incorporate ambient air SO2 monitoring requirements into the Draft Permit. The Idaho Department of Environmental Quality, (the "Department"), references IDAPA 58.01.01.322.06, 5/1/94 (hereinafter, "Regulation 322.06") as the regulatory authority for this requirement. The Tier I operating permit program is designed to address Applicable Requirements (as that term is defined in IDAPA 58.01.01.008.03). Regulation 322.06 requires terms and conditions relating to monitoring and is consistent with that approach. The term, Applicable Requirements, as defined in the Idaho regulations, does not include any ambient standards (except as they relate to temporary sources). Consistent with the definition of Applicable Requirements, the draft Tier I operating permit does not identify any ambient standards as applicable requirements and there are no terms and conditions in the draft permit requiring compliance with any such standards. Regulation 322.06(a) requires sufficient monitoring to ensure compliance with the terms and conditions of the Tier I operating permit. Because there are no terms or conditions requiring compliance with any ambient standards, Regulation 322.06(a) does not authorize ambient air quality monitoring requirements in the draft permit. Regulations 322.06(b) and 322.06(c) refer to Applicable Requirements and also do not authorize ambient air quality monitoring in the draft permit. Regulation 322.06(d) authorizes the Department in incorporating terms and conditions concerning the use, maintenance and installation of the monitoring equipment that is otherwise required. The terms and conditions appearing in Sections 1.20 through 1.20.3 of the draft permit are not authorized by the Idaho regulations and should be deleted in their entirety. Also, a requirement for the owner or operator of a source to undertake ambient air quality monitoring is also prohibited by Idaho statute. Section 39-118B, Idaho Code prohibits any air standard, emissions limitation or control technology requirements from being more stringent than a federal standard, emissions limitation or control technology requirement without being specifically approved by statute. Pursuant to standards issued by the U.S. EPA, all ambient air quality monitoring relating to compliance with federal standards is to be undertaken by the states and not by owners or operators of sources. As a result, a requirement by the Department to impose such ambient air quality monitoring on the owner or operator of a source is not authorized without express approval by statute.

   Even if the requirement to install, maintain and operate ambient air quality monitors was authorized, the deadlines contained in Sections 1.20, 1.20.1 and 1.20.2 are unreasonable. Selection of monitoring sites, a critical element of the monitoring protocol itself, cannot be completed unless and until P4 and the Department reach agreement on an appropriate dispersion model for the plant site. Any such deadlines must be tied to approval of a modeling protocol by the Department.

Response

The regulatory authority for requiring ambient air quality monitors was incorrectly cited in the draft permit. The ambient air quality standards are applicable requirements under Section 200 of the Rules, Procedures and Requirements for Permits to Construct. Prior to modifying the No. 7 furnace in 1989 and 1994, P4 should have submitted an application in accordance with IDAPA 58.01.01.205.01.b that showed emission increases from the modifications would not cause or significantly contribute to violations of any ambient air quality standard. An application was not submitted for the modifications and since that time the Department has monitored exceedances of the SO_2 ambient standards near the boundary of the P4 facility. Therefore, the Department is requiring P4 to conduct ambient monitoring of SO_2 concentrations as a condition for approval of the Tier I operating permit (IDAPA 58.01.01.322.14).

The deadline to submit a modeling analysis was modified to tie the deadline to approval of a modeling protocol rather than issuance of the Tier I operating permit. The modeling analysis must be submitted within 60 days of the Department's approval of the protocol.

2. Tier II Operating Permit: ***P4 requests the removal of Requirements 25.3.3. (now requirement 25.2)*** The Draft Permit includes Section 25, Compliance Schedule and Certification, Compliance Schedule. Section 25.3.3 requires the facility to obtain a Tier II Operating Permit. (See Draft Permit requirements 25.3.3 through 25.3.3.3). Section 25.3.3 of the Draft Permit cites rule 322.10 as regulatory authority for this requirement. That rule requires that a Tier I permit include various terms and conditions relating to compliance schedules "for each applicable requirement" for which the source is not in compliance or which will become effective during the term of the Tier I permit. The definition of Applicable Requirement includes certain permits to construct and "any standard or other requirement provided for in the applicable state implementation plan." After a review of the Idaho State Implementation Plan, (the "SIP"), the requirements for Tier II operating permits are not included in the SIP; therefore, they are not an applicable requirement. The Department does not have the regulatory authority to impose these requirements in the Tier I Operating Permit. Section 25.3.3 of the draft permit should be deleted in its entirety.

Response

As mentioned in the comment, the definition of applicable requirement includes "any standard or other requirement provided for in the applicable state implementation plan, including any revisions to that plan that are specified in 40 CFR Parts 52.670 through 62. 690."

The relevant section of the SIP is 40 CFR 52.681, Permits to construct and operating permits.

40 CFR 52.681(a): Emission limitations and other provisions contained in Permits to Construct or Operating permits, issued by the State of Idaho Department of Health and Welfare in accordance with the federally-approved Rules and Regulations for the Control of Air Pollution in Idaho Manual sections 16.01.01002 Definitions, 16.01.01012 Procedures and Requirements for Permits to Construct and Operating Permits, 16.01.01014 Stack Heights and Dispersion Techniques, and 16.01.01101 Ambient Air Quality Standards and Area Classifications, except for Operating Permits authorizing the use of alternative emission limits (bubbles) under sections 16.01.01012,03.a(1) and 16.01.01012,09 or compliance schedule extensions under section 16.01.01012,03.d, shall be the applicable requirements of the federally-approved Idaho SIP (in lieu of any other provisions) for the purposes of section 113 of the Clean Air Act and shall be enforceable by EPA and by any person in the same manner as other requirements of the SIP.

Section 16.01.01012,03.c gives the Department authority to require an operating permit.

> The Director may require or revise an operating permit for any stationary source or facility whenever the Department determines that:
> i. Emission rate reductions are necessary to attain or maintain any ambient air quality standard or applicable PSD increment; or
> ii. Specific emission standards, or requirements on operation or maintenance are necessary to ensure compliance with any applicable emission standard or regulation.

The contents of 16.01.01012,03.c are now under the citation of IDAPA 58.01.01.401.03. The Department has recorded exceedances of the SO_2 ambient standard near P4's property boundary. Therefore the Department is requiring a combined PTC/Tier II operating permit in Permit Condition 25.2.

3. Process Weight Rate Applicability: ***P4 requests the removal of monitoring requirements associated with the process weight rate for sources listed in Table 1.*** Throughout the Draft Permit, the process weight rate is listed as an applicable standard for all point sources. P4 concurs with this applicability; however, according to EPA White Paper Number 2 (dated March 5, 1996), in the event an emissions source is subject to two overlapping standards for the same requirement, the operating permit requirements may be streamlined where demonstrating compliance with the most stringent standard will subsequently demonstrate compliance for the other overlapping standards. The Department has agreed to not require monitoring requirements for both the process weight rate and the existing permit limit, if one exists for a source. However, throughout the Draft Permit, the Department has monitoring requirements for the process weight rate as well as the existing permit limit, even though there is a

much more stringent standard from an existing permit as clearly discussed throughout the tech memo for the sources listed below in Table 1.

In an effort to be consistent with EPA Guidance Documents, P4 requests the monitoring requirements for the process weight rate be removed from the Draft Permit for those sources with existing permit limits that are more stringent than the process weight rate. Table 1 lists these sources along with their more stringent permit as well as the estimated process weight rate rule limits. In the event the monitoring of the throughput remains in the Draft Permit, the Process Weight Rate is based on the design maximum of a system not a variable rate, (see the Department's response to Draft Permit Comment 1 dated January 8, 2002.) Thus the process weight rate emissions limitations is based on the design of the system and a one-time calculation of the process weight rate based on the design maximum of the system should be all that is required to demonstrate that the existing permit limit is the more stringent standard and no further throughput monitoring should be required.

Table 1 – Process Weight Rate vs. Existing Permit Limit

Emissions Unit No.	Emissions Unit	Existing Permit Limit (lb/hr)	Process Weight Rate Limit (lb/hr)	Tech Memo Reference for Process Weight Rate Limit
2	Dryer Baghouse	1.51	25.07	5.2.2.1
4	105 Baghouse	20.0	21.84	5.4.2.1, Comment 13 in Tech Memo
5	Coke Bunker Baghouse	11.0	30.23	5.5.2.1
6	Coke-Handling Baghouse	20.0	25.07	5.6.2.1
10	No. 7 CO Baghouse	4.13	28.0	5.10.2.1
11	No. 8 CO Baghouse	5.63	45.6	5.11.2.1
12	No. 9 CO Baghouse	7.88	45.6	5.12.2.1
13	Main (Furnace) Stocking System Baghouse	17.63	28	5.13.2.1

Response

White Paper No. 2 (March 5, 1996, page 12) states:

> The monitoring, recordkeeping, and reporting requirements associated with the most stringent emissions requirement are presumed appropriate for use with the streamlined emissions limit, unless reliance on that monitoring would diminish the ability to assure compliance with the streamlined requirements. To evaluate the presumption, compare whether the monitoring proposed would assure compliance with the streamlined limit to the same extent as would the monitoring applicable to each subsumed limit. If not, and if the monitoring associated with the subsumed limit is also relevant to and technically feasible for the streamlined limit, then monitoring associated with a subsumed limit would be included in the permit. The recordkeeping and reporting associated with the selected monitoring approach may be presumed to be appropriate for use with the streamlined limit.
>
> Permitting authorities must include citations to any subsumed requirements in the permit's specification of the origin and authority of permit conditions. In addition, the part 70 permit must include any additional terms and conditions as necessary to assure compliance with the streamlined requirement. In all instances, the proposed permit terms and conditions must be enforceable as a practical matter.

The Department has reviewed the monitoring requirements included in the permit for the streamlined particulate matter emission limits and has determined that the monitoring requirements are necessary to demonstrate compliance with the emissions limit. Throughput monitoring is necessary to demonstrate compliance with the streamlined pound per hour emissions limit. In the case of the dryer (Emissions Unit 2), the March 18, 2002 approval letter limits throughput to 120% of the rate at which the approved source test was conducted. Therefore the permittee must monitor the throughput rate to ensure that it does not exceed 120% of the rate attained during the source test. For many emissions units in the permit, source testing will be conducted during the first year of the permit. Monitoring of throughput rate will be necessary to determine that the emissions units are operated at a rate similar to the rate obtained during the source test. Such is the case for the No. 7, No. 8, and No. 9 CO baghouses, and the Main Stocking System baghouse, among others. Maintaining a record of the design maximum throughput is not sufficient to demonstrate that the emissions unit is operated at a rate similar to the

rate obtained during the approved source test. Once a throughput rate is set by a source test the permittee must monitor throughput on an hourly basis to assure compliance with the emission rate. However, if the source test demonstrates that the actual emissions are much less than the emission limit while operating at or near the design maximum throughput then the permittee may ask the Department to remove the throughput monitoring requirement.

4. Consistency: ***P4 requests the tech memo and the Draft Permit be consistent in citing requirements and referencing between the two documents.*** Specific instances of inconsistencies are included in the following comments.

5. Averaging: ***P4 requests averaging hourly throughputs and emissions throughout the Draft Permit Comments.*** P4 is requesting this averaging concept in an effort to clarify what a specific limit is based upon and ensure a clear understanding between P4 and the Department on each requirement. As agreed upon during Title V negotiations, averaging periods will be defined as an average over a week's time period. (i.e. to determine an average hourly throughput, the amount of material fed over a course of a week will be divided by the total hours of operation during that week.)

Response

The Department does not concur with P4's summary of Title V negotiations respecting this issue. The underlying applicable requirements must be considered when setting averaging periods. For instance, PM_{10} has a 24-hour ambient standard. Therefore, the averaging period should not exceed 24 hours, or daily. NO_x has an annual ambient standard so the averaging period can be annual. In some instances the averaging period is monthly. The Department reviewed the averaging periods in the permit and made adjustments where appropriate.

6. Bin Vents: ***P4 requests the SDM Baghouse and the 304-309 Coke Fines Baghouses be renamed the SDM Bin Vent and the 304-309 Coke Fines Bin Vents.*** These systems are not baghouses as defined in a conventional sense. The systems have filters over the bin ductwork to filter air as it is vented to the atmosphere to reduce emissions. The bin vents do not have a fan associated with them so the air flow is based on the current of the air through the ductwork.

Response

The SDM Baghouse and 304-309 Coke Fines Baghouses have been renamed the SDM Bin Vent Filter and the 304-309 Coke Fines Bin Vent Filters. The term *filter* was included to indicate that the vents are controlled.

7. Emissions Calculations: ***P4 requests the Department approve the usage of an emission factor of 0.01 grains per dry standard cubic foot for numerous baghouses listed throughout the Draft Permit.*** In the draft comments P4 submitted on January 8, 2002, in Comment 14, P4 requested the usage of an emission factor of 0.01 grains/dry standard cubic foot to be included to be used in the emissions calculations unless actual emission data is available. Response to comment 14 in the draft comment response states, "This condition reflects the required method of determining annual emissions set forth in the PTC." The verbiage in the PTC is "Particulate emissions shall not exceed ***x,*** {depending on the source} pounds per hour, as determined by a U.S. EPA Reference Method 5, or approved alternative, emission test. Annual particulate emissions shall not exceed ***x,*** {depending on the source} tons per year, as determined by multiplying the actual emission rate measured by a U.S. EPA Reference Method 5, ***or approved alternative,*** emission test or allowable hourly emission rate (if actual is not available) by the actual hours of operation per year." P4 believes the statement above "or approved alternative" gives the Department the flexibility to approve the usage of an approved AP-42 emission factor, such as the 0.01 grains per dry standard cubic foot. By allowing the usage of this emission factor, it will ensure a more accurate calculation of emissions, rather than grossly overestimating annual emissions by using the allowable emission rate times the annual operating hours.

Response

The insertion of a comma after the word "alternative" in the PTC is a typographical error. The sentence should have been written as follows, "...as determined by multiplying the actual emission rate measured by a U.S. EPA Reference Method 5 or approved alternative emission test, ..." An emission test will provide the actual emission rate, whereas a generic emission factor provides only an estimate of actual emissions. The requirement was written to allow P4 the option of conservatively estimating annual emissions using the allowable emission rate or determining actual emissions by conducting an emission test.

8. Pressure Drop Monitoring: ***P4 requests the Department remove monitoring requirements for pressure drop to be within +/- 20% of a Department approved sampling.*** Pressure drop is routinely a small number and to require a piece of pollution control equipment to stay within +/- 20% of a small number is overly restrictive. For example, manufacturer's specifications for numerous baghouses state that an acceptable range for pressure drop is between 4" – 10". To imply a strict +/- 20% operating limit on these units does not guarantee compliance and is overly burdensome and should be removed from the Draft Permit. In the event the Department still requires the monitoring of pressure drop, the limitation should be –20% rather than +20%. Running pressure drops higher only increase removal efficiency. Requiring the monitoring of higher pressure drops is not value added. Monitoring of flow rates should only be required for –20% of a Department approved sampling for the same reasoning and the +20% should be removed from the Draft Permit as well.

Response

Maintaining the operational parameters at or near the level attained during an approved sampling run is an indicator of proper performance. In general, higher pressure drops indicate more aggressive contact between the liquid and the gas stream, causing smaller particles to be collected with greater efficiency. Changes in scrubber pressure drop can occur for several reasons. Increased pressure drop on a venturi scrubber may be caused by increased liquid flow rate or by adjusting a variable throat damper to a more closed position. A decrease in the pressure drop across a venturi scrubber may be caused by decreased liquid flow rate or by adjusting a variable throat damper to a more open position.[1] A high scrubber solution flow rate into a spray tower type scrubber will generally provide greater contact between the liquid and gas stream but may indicate missing or broken nozzles which could reduce removal efficiency due to improper spray patterns.

Because higher pressure drops and flow rates generally indicate a greater collection efficiency, the +20% limitation has been removed.

Facility-wide Conditions

9. Visible Emissions: ***In an effort to ensure proper numbering, P4 requests that a requirement 1.8 be added between requirements 1.7 and 1.9.***

Response

The paragraph between 1.7 and 1.9 is now correctly numbered 1.8.

10. Section 1, Facility-Wide Conditions, Ambient Air Quality Monitoring Requirements: ***P4 requests the removal of Requirements 1.20 through 1.20.3.*** See General Comment 1. P4 is very concerned about these new requirements and the Department's regulatory authority for adding these requirements to the facility's Tier I Operating Permit.

Response

See response to General Comment 1.

Emissions Point 1 – Phosphate Ore Nodulizing Kiln and Cooler

11. Summary Description, Table 2.1: ***P4 requests Table 2.1 be modified to list the emission control device as Hydrosonic scrubbers and cyclonic separators.***

Response

Cyclonic *scrubbers* was changed to cyclonic *separators*.

12. Summary Description, Table 2.2: ***P4 requests Requirements 2.1 through 2.11 (now renumbered to 2.1 through 2.28) clearly state that they are only applicable to the Kiln Hydrosonics.*** As previously included in comments submitted to the Department on January 8, 2002, the Department has included the Radionuclide National Emissions Standard for Hazardous Air Pollutants, (NESHAP) for this emissions unit. The process

[1] MACT Control Technology Series CD, Developed by the US EPA, OAQPS, Education and Outreach Group)

according to the Draft Permit is defined as the Kiln Hydrosonics and the Cooler Spray Tower. This NESHAP is only applicable to the Kiln Hydrosonics, not the Cooler Spray Tower. The Department only included the verbiage, "Permit conditions 2.1 through 2.10 apply only to emissions from the kiln." To be accurate, this statement should read, "...apply only to emissions from the kiln hydrosonics."

Response

The statement was changed as requested.

Emissions Point 2 – Dryer and Dryer Baghouse 836

13. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 3.11.*** Requirement 3.11 requires a Method 5 test within 270 days of permit issuance. A Method 5 test was conducted on January 30, 2002, which demonstrated full compliance with the particulate permit limit, as concurred by the Department in letter dated March 18, 2002. Per the agreement in the draft comments response received from the Department, adequate sampling has been performed which has demonstrated full compliance and the requirement to stack sample should be removed from the Draft Permit as agreed.

Response

The Department acknowledges that adequate testing has been performed. Therefore, the requirement to conduct a test within 270 days of permit issuance has been removed. A requirement to use the same type of bags that were used during the approved test has been included in the permit.

14. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 3.9.*** Requirement 3.9 requires the monitoring and recording of the average pound per hour throughput of coke and quartzite to the dryer. Requirement 3.12.1 requires the average hourly throughput of the process be maintained. These are duplicate requirements, thus requirement 3.9 should be removed.

Response

The Department concurs that the requirements were duplicative. Requirement 3.9 was removed and requirement 3.12.1, renumbered as 3.11.1, was changed to read "The pound per hour throughput of coke and quartzite to the dryer." The source test approval letter dated March 18, 2002 states, "the maximum production rate based on Section F of PTC #029-00001 is 116 T/hr." Therefore, the permittee must monitor the hourly throughput rate to demonstrate compliance.

15. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirements 3.9 and 3.12.2.*** Requirements 3.9 and 3.12.2 require the monitoring of the throughput of the Dryer. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 1.51 pounds per hour is much more stringent than the process weight rate limit, (which would be approximately 30 pounds per hour based on the feed rate of 97 tons per hour achieved during the latest stack sampling in January, 2002), there should not be monitoring requirements associated with the process weight rate. The monitoring requirements for ensuring compliance with the particulate permit limit should be limited to the calculation of emissions based on the emission factor set during the January, 2002 sampling. See General Comment 3.

Response

See response to General Comment 3.

Emissions Point 4 – Baghouse 105

16. Summary Description: ***P4 requests the summary description be modified to be accurate***. The summary description should be modified to include the collection of dust associated with the transferring of dried quartzite from the 835 belt to the Q1 belt and from the Q1 belt to the Q2 belt. The collection from the 105 pan feeder to the 105 belt should also be added.

Response

The summary description has been modified as requested.

17. Summary Description: ***P4 requests Table 5.1 be modified to be accurate.*** As included in the draft permit comments dated January 8, 2002, P4 requests Table 5.1 be updated to include source ID 115.2, "Q1 Belt Loading ***and Unloading*** – Dried Quartzite."

Response

Source ID 115.20 in Table 5.1 was modified as requested. The emission unit description was changed to "Q1 belt loading and unloading – dried quartzite."

18. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 5.8.1.*** Requirement 5.8.1 requires the monitoring of the throughput of the 105 Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 20 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See response to General Comment 3.

19. Monitoring and Recordkeeping Requirements***: P4 requests Requirement 5.8.2 to include the usage of an emission factor of 0.01 grains per dry standard cubic feet.*** Requirement 5.8.2 requires the calculation of annual emissions be based on the allowable emission rate of the unit, unless actual emission data is available. In the draft comments P4 submitted on January 8, 2002, in Comment 14 P4 requested the usage of an emission factor of 0.01 grains/dry standard cubic foot to be included to be used in the emissions calculations unless actual emission data is available. Response to comment 14 in the draft comment response states, "This condition reflects the required method of determining annual emissions set forth in the PTC." The verbiage in the PTC is "Particulate emissions shall not exceed 20 pounds per hour, as determined by a U.S. EPA Reference Method 5, or approved alternative, emission test. Annual particulate emissions shall not exceed 72.8 tons per year, as determined by multiplying the actual emission rate measured by a U.S. EPA Reference Method 5, ***or approved alternative,*** emission test or allowable hourly emission rate (if actual is not available) by the actual hours of operation per year." P4 believes the statement above "or approved alternative" gives the Department the flexibility to approve the usage of an approved AP-42 emission factor, such as the 0.01 grains per dry standard cubic foot. By allowing the usage of this emission factor, it will ensure a more accurate calculation of emissions, rather than grossly overestimating annual emissions by using the allowable emission rate of 20 pounds per hour times the annual operating hours. Based on the emission factor of 0.01 grains per dry standard cubic feet, the estimated emissions from the baghouse is approximately 0.8 pounds per hour based on a flow of 9,000 cubic feet per minute. See General Comment 7.

Response

See the response to General Comment 7.

Emissions Point 5 – Coke Bunker Baghouse

20. Summary Description: ***P4 requests Table 6.1 be modified to include coke and coke fines in the emissions unit(s)/Process(es).***

Response

The emissions unit description for Source ID 101.20 in Table 6.1 was changed from "Coke railroad car ~~fines~~ unloading" to "Coke fines railroad car unloading."

21. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 6.6.1.*** Requirement 6.6.1 requires the monitoring of the throughput of the Coke Bunker Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and

P4 that the existing particulate permit limit of 11 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See the response to General Comment 3.

22. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 6.6.2 to include the usage of an emission factor of 0.01 grains per dry standard cubic feet.*** Requirement 6.6.2 requires the calculation of annual emissions be based on the allowable emission rate of the unit, unless actual emission data is available. In the draft comments P4 submitted on January 8, 2002, in Comment 18 P4 requested the usage of an emission factor of 0.01 grains/dry standard cubic foot to be included to be used in the emissions calculations unless actual emission data is available. Response to comment 14 in the draft comment response states, "This condition reflects the required method of determining annual emissions set forth in the PTC." The verbiage in the PTC is "Particulate emissions shall not exceed 11 pounds per hour, as determined by a U.S. EPA Reference Method 5, or approved alternative, emission test. Annual particulate emissions shall not exceed 5.5 tons per year, as determined by multiplying the actual emission rate measured by a U.S. EPA Reference Method 5, ***or approved alternative,*** emission test or allowable hourly emission rate (if actual is not available) by the actual hours of operation per year." P4 believes the statement above "or approved alternative" gives the Department the flexibility to approve the usage of an approved AP-42 emission factor, such as the 0.01 grains per dry standard cubic foot. By allowing the usage of this emission factor, it will ensure a more accurate calculation of emissions, rather than grossly overestimating annual emissions by using the allowable emission rate of 11 pounds per hour times the annual operating hours. Based on the emission factor of 0.01 grains per dry standard cubic feet, the estimated emissions from the baghouse is approximately 1.3 pounds per hour based on a flow of 15,000 cubic feet per minute. See General Comment 7.

Response

See response to General Comment 7.

Emissions Point 6 – Coke-Handling Baghouse

23. Summary Description: ***P4 requests Table 7.1 be updated.*** As included in P4's draft comments submitted January 8, 2002, Table 7.1 source ID's 132.20 and 132.30 Emission unit(s)/Process(es) should read "Belt 827 to Belt 828 – Dried and Undried Coke Fines".

Response

The description for source IDs 132.20 and 132.30 has been modified as requested.

24. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 7.8.1.*** Requirement 7.8.1 requires the monitoring of the throughput of the Coke-Handling Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 20 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See the response to General Comment 3.

25. Monitoring and Recordkeeping Requirements: ***P4 requests 7.8.3 be included in Draft Permit to ensure numbering accuracy.*** The Draft Permit skips from requirement 7.8.2 to 7.8.4 and a requirement in between these does not have a number.

Response

The Department concurs and the paragraph between 7.8.2 and 7.8.4 was numbered 7.8.3.

26. Monitoring and Recordkeeping Requirements: ***P4 requests requirement 7.8.3 to include the usage of an emission factor of 0.01 grains per dry standard cubic feet.*** Requirement 7.8.3 requires the calculation of annual emissions be based on the allowable emission rate of the unit, unless actual emission data is available. In the draft comments P4 submitted on January 8, 2002, in Comment 23 P4 requested the usage of an emission factor of 0.01 grains/dry standard cubic foot to be included to be used in the emissions calculations unless actual emission data is available. Response to comment 14 in the draft comment response states, "This condition reflects the required method of determining annual emissions set forth in the PTC." The verbiage in the PTC is "Particulate emissions shall not exceed 20 pounds per hour, as determined by a U.S. EPA Reference Method 5, or approved alternative, emission test. Annual particulate emissions shall not exceed 72.8 tons per year, as determined by multiplying the actual emission rate measured by a U.S. EPA Reference Method 5, ***or approved alternative,*** emission test or allowable hourly emission rate (if actual is not available) by the actual hours of operation per year." P4 believes the statement above "or approved alternative" gives the Department the flexibility to approve the usage of an approved AP-42 emission factor, such as the 0.01 grains per dry standard cubic foot. By allowing the usage of this emission factor, it will ensure a more accurate calculation of emissions, rather than grossly overestimating annual emissions by using the allowable emission rate of 20 pounds per hour times the annual operating hours. Based on the emission factor of 0.01 grains per dry standard cubic feet, the estimated emissions from the baghouse is approximately 2.2 pounds per hour based on a flow of 26,000 cubic feet per minute. See General Comment 7.

Response

See response to General Comment 7.

Emissions Point 7 – Bulk Storage Bin Baghouse

27. Summary Description: ***P4 requests the summary description be updated to ensure accuracy.*** The summary description refers to the transfer associated with moving crushed coke fines from the first air conveyor to the bulk storage bin. This part should read transfer associated with moving coke fines from the bulk storage bin to the first air conveyor.

Response

The summary description has been updated.

28. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 8.5.1 read "the calculated average hourly emissions from the process."*** Requirement 8.5.1 requires the monitoring and recordkeeping be kept for the calculated hourly emissions from the process. See General Comment 5.

Response

The requirement has been modified to specify that the required monitoring data is calculated average hourly emission. See response to General Comment 5.

Emissions Point 8 – Six Furnace Feed Bin Baghouses (No. 304 – No. 309)

29. Summary Description: ***P4 requests the summary description as well as Table 9.1 be modified to state the bins are vented to bin vents, not baghouses, see Comment 50 in the Draft Permit comments dated January 8, 2002.*** The summary description states the bins are vented to baghouses. In an effort to ensure accuracy, P4 also requests the entire Draft Permit and the tech memo refer to these units as Bin Vents rather than baghouses. The Draft Permit should be modified in the Table of Contents, throughout pages 34-35, and in Appendix A. The tech memo should be modified in the Table of Contents and throughout pages 36-38.

Response

The clarification has been made. See response to General Comment 6.

30. Monitoring and Recordkeeping Requirements: ***P4 requests the deletion of Requirement 9.4, which requires monitoring of the pressure drop and the plant compressed air pressure.*** In an effort to reflect good maintenance practices for bin vents, P4 requests the monitoring and recordkeeping requirements require checks of solenoids, air gauge, diaphragm, and outlet be completed every 6 months and bags replaced every 3 years

unless weekly visual checks indicate a need sooner. P4 also requests the deletion of Requirement 9.4, which requires monitoring of the pressure drop and the plant compressed air pressure since these readings do not reflect proper bin vent operation and as communicated in EPA Guidance, are not similar in magnitude to the emissions. See General Comment 6.

Response

The Department has not changed the monitoring and recordkeeping requirements. P4 has failed to demonstrate that the monitoring proposed in comment 30 is more appropriate than the monitoring contained in the draft permit.

31. Monitoring and Recordkeeping Requirements: ***P4 requests requirement 9.5.1 to include the usage of an emission factor of 0.01 grains per dry standard cubic feet.*** Requirement 9.5.1 requires the calculation of annual emissions be based on the allowable emission rate of the unit, unless actual emission data is available. In the draft comments P4 submitted on January 8, 2002, in Comment 32 P4 requested the usage of an emission factor of 0.01 grains/dry standard cubic foot to be included to be used in the emissions calculations unless actual emission data is available. Response to comment 14 in the draft comment response states, *"This condition reflects the required method of determining annual emissions set forth in the PTC."* The verbiage in the PTC is *"Particulate emissions shall not exceed 0.33 pounds per hour, as determined by a U.S. EPA Reference Method 5, or approved alternative, emission test. Annual particulate emissions shall not exceed 1 ton per year, as determined by multiplying the actual emission rate measured by a U.S. EPA Reference Method 5,* ***or approved alternative,*** *emission test or allowable hourly emission rate (if actual is not available) by the actual hours of operation per year."* P4 believes the statement above "or approved alternative" gives the Department the flexibility to approve the usage of an approved AP-42 emission factor, such as the 0.01 grains per dry standard cubic foot. By allowing the usage of this emission factor, it will ensure a more accurate calculation of emissions, rather than grossly overestimating annual emissions by using the allowable emission rate of 0.33 pounds per hour times the annual operating hours. Based on the emission factor of 0.01 grains per dry standard cubic feet, the estimated emissions from the baghouse is approximately 0.017 pounds per hour based on a flow of 200 cubic feet per minute. See General Comment 7.

Response

See response to General Comment 7.

Emissions Point 9 – Scaleroom Baghouse

32. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 10.10.1 by modified to state, "Once each week, P4 shall record the maximum hourly throughput of the process."*** Operating Requirement 10.4 requires "The maximum production rate shall not exceed 105% of the rate achieved during the most recent emissions test approved by the Department..." By monitoring only the maximum weekly throughput of the process, this will ensure full compliance with Operating Requirement 10.4.

Response

The Department needs to see each hourly throughput to verify that no hour exceeded 105% of the rate achieved during the most recent performance test. P4 must monitor and maintain records of the hourly throughput. No change has been made to the draft permit in response to this comment.

Emissions Point 10 – No. 7 CO Baghouse

33. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 11.8.1.*** Requirement 11.8.1 requires the monitoring of the throughput of the No. 7 CO Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 4.13 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See the response to General Comment 3.

34. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 11.8.1 be modified to state, "the maximum hourly throughput of the process."*** In the event requirement 11.8.1 remains in permit, it requires the monitoring of the hourly throughput of the process. By monitoring the maximum throughput, this ensures the design maximum of the system is not exceeded, and thus provides a demonstration that the existing permit limit is a more stringent standard than the process weight rate limit. See General Comment 3.

Response

See the response to General Comment 3.

Emissions Point 11 – No. 8 CO Baghouse

35. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 12.8.1.*** Requirement 12.8.1 requires the monitoring of the throughput of the No. 8 CO Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 5.63 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See the response to General Comment 3.

36. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 12.8.1 be modified to state, "the maximum hourly throughput of the process."*** In the event requirement 12.8.1 remains in permit, it requires the monitoring of the hourly throughput of the process. By monitoring the maximum throughput, this ensures the design maximum of the system is not exceeded, and thus provides a demonstration that the existing permit limit is a more stringent standard than the process weight rate limit. See General Comment 3.

Response

See the response to General Comment 3.

37. Monitoring and Recordkeeping Requirements: ***To ensure consistent numbering throughout permit, P4 requests the requirement "These records shall be maintained in accordance with Permit Condition 1.11" be identified as 12.8.4.***

Response

The requirement has been numbered.

Emissions Point 12 – No. 9 CO Baghouse

38. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 13.8.1.*** Requirement 13.8.1 requires the monitoring of the throughput of the No. 9 CO Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 7.88 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See the response to General Comment 3.

39. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 13.8.1 be modified to state, "the maximum hourly throughput of the process."*** By monitoring the maximum throughput, this ensures the design maximum of the system is not exceeded, and thus provides a demonstration that the existing permit limit is a more stringent standard than the process weight rate limit. See General Comment 3.

Response

See the response to General Comment 3.

Emissions Point 13 – Main (Furnace) Stocking System Baghouse

40. Summary Description: ***P4 requests the column "Permit Limit/Standard Summary" reference IDAPA 58.01.01.702 rather than the Process Weight Rate in an effort to be consistent throughout the Draft Permit.*** See General Comment 4.

Response

The reference under the "Permit Limit/Standard Summary" column was not changed. The reference is currently IDAPA 58.01.01.702 because the underlying applicable requirement from the Tier II operating permit dated October 23, 2000 states "Particulate matter emissions shall not exceed the emission limit set in IDAPA 58.01.01.702, or 17.63 lb/hr, whichever is more restrictive..."

41. Monitoring and Recordkeeping Requirements: ***P4 requests the removal of Requirement 14.8.1.*** Requirement 14.8.1 requires the monitoring of the throughput of the Main (Furnace) Stocking System Baghouse. Since this is a monitoring requirement associated with the Process Weight Rate, and it has been previously agreed by the Department and P4 that the existing particulate permit limit of 17.63 pounds per hour is much more stringent than the process weight rate limit, see General Comment 3, there should not be monitoring requirements associated with the process weight rate.

Response

See the response to General Comment 3.

42. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 14.8.1 be modified to state, "the maximum hourly throughput of the process."*** In the event requirement 14.8.1 remains in permit, it requires the monitoring of the hourly throughput of the process. By monitoring the maximum throughput, this ensures the design maximum of the system is not exceeded, and thus provides a demonstration that the existing permit limit is a more stringent standard than the process weight rate limit. See General Comment3.

Response

See the response to General Comment 3.

43. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 14.7 be modified to require the records shall be maintained in accordance with Permit Condition 1.1 to ensure consistency throughout permit.*** Requirement 14.7 requires the records shall be submitted in the monthly Air Emission Audit Report. P4's current Air Emission Audit Report does not require this information to be submitted. See General Comment 4.

Response

Permit Condition 14.7 was modified to require records be maintained in accordance with Permit Condition 1.11. The monthly Air Emission Audit Report provision was proposed in Table 11 of the application but is not required.

Emissions Point 14 – Nodule Reclaim Baghouse

44. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 15.4.1 be modified to read, "The maximum hourly throughput of the process."*** Requirement 15.4.1 requires the monitoring of the hourly throughput of the process. By monitoring the maximum throughput, this ensures the design maximum of the system is not exceeded, and thus provides a demonstration that the existing permit limit is a more stringent standard than the process weight rate limit. See General Comment 3.

Response

See the response to General Comment 3.

45. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 15.4.2 be modified to read, "The maximum calculated process weight rate limitation using the formula in Permit Condition 15.1."*** Requirement 15.4.2 requires the monitoring of the calculated process weight rate limitation using the formula in Permit Condition 15.1. See General Comment 3.

Response

The Department agrees the requirement should be restated to make it clear that the emission limitation is calculated using the maximum process weight rate. Therefore, Requirement 15.4.2 was changed from "The calculated process weight rate limitation using the formula in Permit Condition 15.1." to "The calculated emission limitation using the maximum process weight rate for nodule handling and the formula in Permit Condition 15.1."

46. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 15.4.3 be modified to read, "The calculated average hourly emissions using an emission factor of 0.01 gr/dscf, unless actual emission data is available."*** Requirement 15.4.3 requires the monitoring of the calculated hourly emissions using an emission factor of 0.01 gr/dscf, unless actual emissions data is available. See General Comment 5.

Response

The requested change has been made. See the response to General Comment 5.

Emissions Point 15 – Separator Discharge Material (SDM) Baghouse

47. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 16.4.2 be modified to read, "The maximum calculated process weight rate limitation using the formula in Permit Condition 16.1."*** In the Department's response to Draft Comments dated January 8, 2002, the Department states that the process weight rate should be determined based on the system's maximum or design capacity. Based on P4's Title V Operating Permit Application, the maximum design rate is 51.0 tons per hour for the SDM system. Therefore, P4 should not be required to calculate numerous average hourly throughput limits based on the Department's Draft Comments response to Comment 1, dated January 8, 2002. See General Comment 3.

Response

The Department agrees the requirement should be restated to make it clear that the emission limitation is calculated using the maximum process weight rate. Therefore, Requirement 16.4.2 was changed from "The calculated process weight rate limitation using the formula in Permit Condition 16.1." to "The calculated emission limitation using the maximum process weight rate and the formula in Permit Condition 16.1."

48. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 16.3 be modified from a 6 month visual bag inspection to a requirement which would require checks of the solenoids, air gauge, diaphragm, and outlet every 6 months and bags replaced every 2 years unless weekly visual checks indicate a need sooner.*** In an effort to reflect good maintenance practices for bin vents, the suggested modifications are necessary to ensure proper operation and also ensure the following of EPA Guidance, which states that the monitoring requirements should be reflective of the magnitude of the emissions source.

Response

The Department has not changed the monitoring and recordkeeping requirements. P4 has failed to demonstrate that the monitoring proposed in comment 48 is more appropriate than the monitoring contained in the draft permit.

49. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 16.4.3 be modified to read, "The calculated average hourly emissions using an emission factor of 0.01 gr/dscf, unless actual emission data is available."*** Requirement 16.4.3 requires the monitoring of the calculated hourly emissions using an emission factor of 0.01 gr/dscf, unless actual emissions data is available. See General Comment 5.

Response

Requirement 16.4.3 was changed to read, "The calculated monthly average hourly emissions..." in order to maintain consistency with requirement 16.4.4, which requires recording the monthly hours of operation.

50. General Comment: ***P4 requests all references to the Separator Discharge Material (SDM) Baghouse be renamed the Separator Discharge Material (SDM) Bin Vents.*** As communicated in Comment 50 in the Draft Permit comments dated January 8, 2002, the SDM pollution control equipment is not a baghouse, however it is a bin vent. See General Comment 6. The SDM Bin Vent is referred to as a baghouse in the Draft Permit in the Table of Contents, Appendix A, and on pages 50-51. It also occurs in the tech memo in the Table of Contents and on pages 51-53.

Response

The requested changes have been made.

Emissions Point 16 – Nodule-Crushing and Screening Scrubber

51. Summary Description: ***P4 requests the Emission unit(s)/Process(es) for Source ID 418.00 read "North and south quad deck screens".*** Table 17.1, Source ID 418.00 lists the quadruple screens.

Response

The change has been made.

52. Operating Requirements: ***P4 requests that requirement 17.9 be modified to require only the monitoring and recordkeeping of the flow rate and remove the monitoring of the pressure drop.*** Requirement 17.4 requires the installation, operation, calibration, and maintenance of instrumentation to record the pressure drop across the scrubber. P4 concurs that this is an existing permit requirement. However, the Nodule Crushing and Screening Scrubber is a low-energy type wet scrubber and as long as there is adequate water flow to this scrubber, differential pressure does not have any effect on the performance of the unit and monitoring of pressure drop adds no assurance that the pollution control equipment is operating effectively.

Response

The Department agrees that maintaining an adequate fluid flow rate to the scrubber is more important than the pressure drop across the scrubber for low-energy, or spray tower type, wet scrubbers. However, the pressure drop across the scrubber is still a useful indicator of performance. An increased pressure drop could be caused by plugging somewhere within the scrubber, such as within the mist eliminators. Therefore, weekly monitoring of the pressure drop remains.

53. Operating Requirements: ***P4 requests Requirement 17.8 be modified to read, "The scrubber shall be operated so that the scrubber solution flow rate is maintained within –20% of the solution flow rate recorded during the Department-approved compliance test..."*** Requirement 17.8 requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate does not appear to be value added due to the higher the flow rate the more efficient the pollution control equipment. Also, the monitoring of pressure drop on this piece of equipment does not ensure that the unit is operating properly, see Comment 52. Pressure drop is routinely a small number and to require a range of only +/- 20% on a small number leaves only a small range to operate the system. This modification will provide for adequate monitoring requirements to ensure the pollution control equipment is operating in an efficient manner. See General Comment 8.

Response

Requirement 17.8 was modified to read: "The scrubber shall be operated so that the scrubber solution flow rate is maintained above 80% of the solution flow rate recorded during the Department-approved compliance test." See response to General Comment 8. For a low-energy type scrubber, differential pressure drop is not as important as scrubber solution flow rate for determining proper operation.

54. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 17.9 be modified to require the records shall be maintained in accordance with Permit Condition 1.1.*** Requirement 17.9 requires the records shall be submitted in the monthly Air Emission Audit Report. P4's current Air Emission Audit Report does not require this information to be submitted.

Response

The requirement to submit the pressure drop and flow rate data in the monthly audit report was removed. The records should be maintained in accordance with Permit Condition 1.11.

55. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 17.10.1 be modified to read, "The maximum hourly throughput of the process."*** Requirement 17.10.1 requires the monitoring of the hourly throughput of the process. By monitoring the maximum throughput, this ensures the design maximum of the system is not exceeded, and thus provides a demonstration that the existing permit limit is a more stringent standard than the process weight rate limit. See General Comment 3.

Response

The Department needs to see each hourly throughput to verify what the maximum throughput is.

56. Monitoring and Recordkeeping Requirements: ***P4 requests the requirement to be modified to read, "The maximum calculated process weight rate limitation using the formula in Permit Condition 17.1 if the process weight rate attained during the Department approved compliance test is below 416,600."*** Requirement 17.10.2 requires the monitoring of the calculated process weight rate limitation using the formula in Permit Condition 17.1. See General Comment 3.

Response

The change has been made.

Emissions Point 17 – No. 7 Tap Hole Fume Collector

57. Summary Description: ***In an effort to be accurate, P4 requests the summary description include the seal pots reference in Table 21.1.***

Response

The following sentence was included in the No. 7 THFC summary description, "The No. 7 THFC may be used to control emissions from the seal pots (see section 21) when the No. 9 THFC is down."

58. Operating Requirements: ***P4 requests Requirement 18.5 be modified to read, "The scrubber shall be operated so that the scrubber solution flow rate and the pressure drop is maintained within –20% of the solution flow rate and pressure drop recorded during the Department-approved compliance test..."*** Requirement 18.5 requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate and the pressure drop does not appear to be value added due to the higher the flow rate and pressure drop the more efficient the pollution control equipment. This modification will provide for adequate monitoring requirements to ensure the pollution control equipment is operating in an efficient manner. See General Comment 8.

Response

Requirement 18.5 was changed to the following: "The scrubber shall be operated so that the pressure drop across the scrubber and scrubber fluid flow rate are maintained at or above 80% of the pressure drop and solution flow rate recorded during the Department-approved compliance test." Also see the response to General Comment 8.

59. Monitoring and Recordkeeping Requirements: ***P4 requests Requirement 18.7.1 read, "The maximum hourly process weight rate."*** Requirement 18.7.1 requires the daily average hourly process weight rate be monitored. See General Comment 3.

Response

No change has been made. See the response to General Comment 3.

60. Monitoring and Recordkeeping Requirements: ***P4 requests the requirement to be modified to read, "The average calculated hourly emission limitation using the 0.2 lb/T emission limit..."*** Requirement 18.7.2 requires the monitoring of the calculated hourly emission limitation using the 0.2 lb/T emission limit. See General Comment 5.

Response

Requirement 18.7.2 was modified to read, "The daily average calculated hourly emission limitation..." in order to maintain consistency with the averaging period in 18.7.1.

Emissions Point 18 – No. 8 Tap Hole Fume Collector

61. Operating Requirements: ***P4 requests requirement 19.5 be modified to read, "The scrubber shall be operated so that the scrubber solution flow rate and pressure drop is maintained within –20% of the solution flow rate and pressure drop recorded during the Department-approved compliance test..."*** Requirement 19.5 requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate and the pressure drop does not appear to be value added due to the higher the flow rate and pressure drop the more efficient the pollution control equipment. This modification will provide for adequate monitoring requirements to ensure the pollution control equipment is operating in an efficient manner. See General Comment 8.

Response

Requirement 19.5 was changed to the following: "The scrubber shall be operated so that the pressure drop across the scrubber and scrubber fluid flow rate are maintained at or above 80% of the pressure drop and solution flow rate recorded during the Department-approved compliance test." Also see the response to General Comment 8.

62. Monitoring and Recordkeeping Requirements: ***P4 requests requirement 19.7.1 read, "The maximum hourly process weight rate."*** Requirement 19.7.1 requires the daily average hourly process weight rate be monitored. See General Comment 3.

Response

No change has been made. See the response to General Comment 3.

63. Monitoring and Recordkeeping Requirements: ***P4 requests the requirement to be modified to read, "The average calculated hourly emission limitation using the 0.2 lb/T emission limit..."*** Requirement 19.7.2 requires the monitoring of the calculated hourly emission limitation using the 0.2 lb/T emission limit. See General Comment 5.

Response

Requirement 18.7.2 was modified to read, "The daily average calculated hourly emission limitation..." in order to maintain consistency with the averaging period in 19.7.1.

Emissions Point 19 – No. 9 Tap Hole Fume Collector

64. Summary Description: ***In an effort to be accurate, P4 requests the summary description include the collection of the seal pots referenced in Table 21.1.***

Response

The following sentence was included in the No. 9 THFC summary description, "The No. 9 THFC also controls emissions from the seal pots (see section 21)."

65. Operating Requirements: ***P4 requests requirement 19.5 be modified to read, "The scrubber shall be operated so that the scrubber solution flow rate and pressure drop is maintained within –20% of the solution flow rate and pressure drop recorded during the Department-approved compliance test..."***

Requirement 20.5 requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate and pressure drop does not appear to be value added due to the higher the flow rate and pressure drop the more efficient the pollution control equipment. This modification will provide for adequate monitoring requirements to ensure the pollution control equipment is operating in an efficient manner. See General Comment 8.

Response

Requirement 20.5 was changed to the following: "The scrubber shall be operated so that the pressure drop across the scrubber and scrubber fluid flow rate are maintained at or above 80% of the pressure drop and solution flow rate recorded during the Department-approved compliance test." Also see the response to General Comment 8.

66. Monitoring and Recordkeeping Requirements: ***P4 requests requirement 19.7.1 read, "The maximum hourly process weight rate."*** Requirement 19.7.1 requires the daily average hourly process weight rate be monitored. See General Comment 3.

Response

No change has been made. See the response to General Comment 3.

67. Monitoring and Recordkeeping Requirements: ***P4 requests the requirement to be modified to read, "The average calculated hourly emission limitation using the 0.2 lb/T emission limit..."*** Requirement 19.7.2 requires the monitoring of the calculated hourly emission limitation using the 0.2 lb/T emission limit. See General Comment 5.

Response

Requirement 20.7.2 was modified to read, "The daily average calculated hourly emission limitation..." in order to maintain consistency with the averaging period in 20.7.1.

Emissions Point 20 – Phosphorus Storage

68. General Comment: ***P4 requests Table 21.1 be modified as shown below to ensure accuracy.***

Source ID	Emissions unit(s)/Process(es)	Emission Control Device
707.00	Acid water tank seal pot	No. 9 THFC with No. 7 THFC backup
710.10	Wastewater tank seal pot	No. 9 THFC with No. 7 THFC backup
712.00	East mud tank seal pot	No. 9 THFC with No. 7 THFC backup
713.00	West mud tank seal pot	No. 9 THFC with No. 7 THFC backup
714.00	CO phos trap seal pot	Vented to atmosphere
715.00	554/508 mud tank seal pot	No. 9 THFC with No. 7 THFC backup
717.00	Phosphorus loading leg	Vented to atmosphere
717.10	Phosphorus loading sump	Vented to atmosphere

Response

The table has been modified.

69. Summary Description: ***P4 requests the deletion of source ID 700.00.*** Table 21.1, Source ID 700.00 shows the emissions control device for this emissions unit as the No. 9 THFC with the No. 7 THFC backup. There are no longer seal pots on the 1-4 tanks. All gas from these tanks goes to the Acid Water Tank through the overflows. See Comment 68.

Response

Source ID 700.00 has been deleted.

70. Summary Description: ***P4 requests the deletion of Source ID 702.00.*** Table 21.1, Source ID 702.00 shows that there are explosion seals on Tanks 1-4. The explosion seals on these tanks were removed when the seal pots were removed. See Comment 68.

Response

Source ID 702.00 has been deleted.

71. Summary Description: ***P4 requests the deletion of Source ID 704.00.*** Table 21.1, Source ID 704.00 shows that tanks 5-7 have seal pots. The seal pots were removed from these tanks and the off gas is sent to the Acid Water Tank through the overflows. See Comment 68.

Response

Source ID 704.00 has been deleted.

72. Summary Description: ***P4 requests that the Emission Control Device states that Source ID 714.00 is vented to the atmosphere.*** Table 21.1, Source ID 714.00 shows that the CO phos trap seal pot is vented through the No. 9 THFC with No. 7 THFC backup. P4 also requests a monitoring requirement be added for a see/no see opacity observation on a weekly basis. See Comment 68.

Response

The change has been made.

73. Summary Description: ***P4 requests that Source ID 716.00 be deleted***. Table 21.1, Source ID 716.00 states that the 521 water tank seal pot is vented through the No. 9 THFC with the No. 7 THFC backup. The 521 water tank is simply a hot water tank of clean water does not have a seal pot and is not connected to the THFC systems. See Comment 68.

Response

Source ID 716.00 has been deleted.

74. Summary Description: ***P4 requests the emission control device for Source Ids 717.00 and 717.10 state these points are vented to the atmosphere.*** Table 21.1 Source Ids 717.00 and 717.10 shows that the Phosphorus loading leg and sump are collected by the No. 9 THFC with the No. 7 THFC backup. These are actually fugitive sources. See Comment 68.

Response

The change has been made.

Emissions Point 21 and Emissions Point 22 – No. 7 and No. 8 CO Flare, No. 9 CO Flare

75. General Comment: ***P4 requests Emission Unit 21 - No. 7 and No. 8 CO Flare and Emissions Unit 22 - No. 9 CO Flare be combined to form the CO Flare System.*** The systems are operated as one at the plant and the permit conditions are applicable to the total amount of refuse (ie. CO) burned, thereby not dependent on individual furnace monitoring. Combining the emission units for this purpose does not affect the current direction of burning the maximum amount of CO in the kiln. The recommended permit wording includes the requirements of the current No. 7 and No. 8 CO Flare and the No. 9 CO Flare monitoring and record-keeping and applies the commitments made in the No. 9 CO Flare Compliance Plan to the entire CO system. The only change requested for the current monitoring and record-keeping requirements is monthly (instead of weekly) calculation of average lb/hr refuse burned. CO generation is determined by the stoichiometric relationship to phosphorus produced. Plant practice determines total phosphorus produced on a monthly basis, therefore, weekly CO numbers would not be as accurate as monthly. If the emission units are not combined, provisions 22.5 and 23.5 should be changed to total CO flow to the flares since CO flow to the individual flares is not available. See Attachment 1 for recommended wording.

Response

The Department understands that Emission Unit 21 – No. 7 and No. 8 CO Flare and Emissions Unit 22 – No. 9 CO flare could be combined into one emissions unit and thanks P4 for providing recommended wording. However, at this point in the permitting process, changing the emissions unit numbering would require updating numerous permit condition references throughout the permit and technical memorandum. Therefore, the CO flares will remain as separate emissions units. The frequency of calculating the average hourly refuse burned was changed from weekly to monthly and Permit Conditions 22.5 and 23.5 were changed to reflect total CO flow to the flares.

Section 25 Compliance Schedule and Certification

76. Tier II Operating Permit: ***P4 requests the removal of Requirement 25.3.3.*** Requirement 25.3.3 requires the facility to obtain a Tier II Operating Permit. See General Comment 2.

Response

See response to General Comment 2.

Section 26 Insignificant Activities

77. ***As previously agreed, P4 requests the addition of the lime silo bin vent to the list of insignificant activities.***

Response

The lime silo bin was added to the list of insignificant activities. Lime silos and feed bins are presumptively insignificant activities under IDAPA 58.01.01.317.01.a.i.(95).

78. ***P4 requests Source ID 560.50 be modified to show the description to be, "No. 7 hearth fan gasoline fuel tank."*** Source ID 560.50 shows the description to be, "No. 7 hearth fan diesel fuel tank."

Response

The change has been made.

79. ***P4 requests the emission point for Source ID 560.65 show outside building, not inside building.*** Source ID 560.65 shows the emission point of the shell motor pump to be Pt, inside building.

Response

The change has been made.

80. ***P4 requests Source ID 584.50 to reference citation Section 317.01.b.3 Diesel storage tank, 200 gallons since it is a diesel fuel tank.*** Source ID 584.50 shows the insignificant activities IDAPA citation to be Section 317.01.b.3.

Response

The change has been made.

81. ***P4 requests Source ID 584.55 read for the description, "No. 8 hearth fan fuel electrical backup motor (diesel driven.)"*** Also, the insignificant activities IDAPA citation should be Section 317.01.b7, Diesel fuel.

Response

The change has been made.

82. P4 requests Source ID 608.5 read for the insignificant activities IDAPA citation as Section 317.01.b3, Diesel storage tank.

Response

The change has been made.

83. P4 requests Source ID 608.55 read for the description. "No. 9 hearth fan fuel electric backup motor (diesel driven.)"

Response

The change has been made.

Technical Analysis for Tier I Operating Permit Comments

1. Facility Classification: ***P4 requests Section 4.1.2 be modified to states that the facility is not a designated facility as defined in IDAPA 58.01.01.006.27.*** Section 4.1.2 states that the Soda Springs plant is a designated facility. The Soda Springs Plant is not a designated facility. There are no applicable NSPS standards and the facility is specifically exempted from the NSPS for Phosphate Rock Processing Facilities, 40 CFR Subpart NN.

Response

The Soda Springs plant is a designated facility under IDAPA 58.01.01.006.27.m. (Phosphate rock processing plant). As stated in 4.1.2, the facility is not subject to 40 CFR 60 Subpart NN. 40 CFR 60.400(a) specifically exempts facilities producing or preparing phosphate rock solely for consumption in elemental phosphorus production. This non-applicability determination is provided in section 4.3.3 of the technical analysis.

2. Alternate Operating Scenarios: ***As included in the draft comments dated January 8, 2002, P4 requests the technical memorandum also include the alternate operating scenario described below.***

Primary Process Method	Alternate Process Method	Effect on Emissions
Furnace fumes are currently collected for each furnace by an individual Tap Hole Fume Collector.	While a furnace is down, furnace fumes can be collected by a Tap Hole Fume Collector from a different furnace.	This scenario allows for additional fugitive emissions collections during periods of furnace down time.

Response

The alternate operating scenario has been included in the technical memorandum.

Emissions Point 1 – Phosphate Ore-Nodulizing Kiln

3. Compliance Demonstration Method: ***P4 requests Section 5.1.4.2 be updated to reflect the most recent stack sampling conducted in October, 2001.*** Section 5.1.4.2 states that the last stack sampling occurred October, 2001. However, the source test was performed at an average kiln production rate of 246 tons per hour, which corresponds to an allowable emission rate of 38.55 lb/hr. This was communicated to the Department by letter dated December 12, 2001. The actual emission rate during this source test was 35.06 lb/hr.

Response

The Department reviewed the information submitted in the December 12, 2001 letter and found that the test was conducted at a production rate of 246 tons per hour and that the actual emission rate was 35 pounds per hour. The information has been changed in the technical memorandum.

4. Monitoring: ***P4 requests that the tech memo be modified to be consistent with the Draft Permit.*** Section 5.1.4.3 states that the permittee will monitor the weight of material processed in tons per month. The Draft Permit requires the monitoring of the average hourly throughput of the process. See General Comment 4.

Response

The tech memo was modified to explain what information P4 needs to obtain the average hourly throughput of the process on a monthly basis. It now reads, "The permittee will monitor the weight of material processed in tons per month and hours of operation per month to determine an average hourly throughput on a monthly basis.

Permit Condition 2.17.1 was modified to make it clear that the average hourly throughput rate is to be determined on a monthly basis.

5. Recordkeeping: ***P4 requests Section 5.1.4.5.c be removed from the tech memo to ensure accuracy between the tech memo and the Draft Permit.*** Section 5.1.4.5.b requires the permittee maintain records of the calculated hourly process weight rate limitations using the formula in Permit Condition 2.17. However, the Draft Permit does not show this as a requirement. See General Comment 4.

Response

Section 5.1.4.5.**b** was removed from the tech memo. It had required the permittee to maintain records of the calculated process weight rate limitations. The requirement was not in the permit.

6. Recordkeeping: ***P4 requests Section 5.1.4.5.a be modified to state, "the average hourly throughput of the process."*** Section 5.1.4.5.a states that the facility must maintain records of the hourly throughput of the process. See General Comment 5.

Response

Section 5.1.4.5.a was modified to state, "the average hourly throughput of the process on a monthly basis.

7. Recordkeeping: ***P4 requests this be modified to state, "The average calculated hourly process weight rate limitations..."*** Section 5.1.4.5.b states that the facility must maintain records of the calculated hourly process weight rate limitations using the formula in Permit Condition 2.17. See General Comment 5.

Response

Section 5.1.4.5.b was removed from the tech memo as requested above in 5.

Emissions Point 2 – Dryer & Dryer Baghouse 836

8. Compliance Demonstration: ***P4 requests Section 5.2.2.3 be modified to remove the requirement to stack sample the Dryer Baghouse.*** Section 5.2.2.3 states that the permittee will conduct a Method 5 source test within 270 days of permit issuance. A Method 5 test was conducted on January 30, 2002, which demonstrated full compliance with the particulate permit limit, as concurred by the Department in letter dated March 18, 2002. Per the agreement in the draft comments response received from the Department, adequate sampling has been performed which has demonstrated full compliance and the requirement to stack sample should be removed from the Draft Permit as agreed.

Response

Section 5.2.2.3 has been modified to explain that a compliance test has been conducted and approved by the Department.

9. Monitoring: ***P4 requests Section 5.2.2.4 be modified to read that opacity will be monitored weekly on a see/no see basis to be consistent with Appendix A.*** Section 5.2.2.4 states that opacity from the baghouse stack will be monitored once each month. See General Comment 4.

Response

The requested modification has been made.

10. Recordkeeping: ***P4 requests Section 5.2.2.6 be modified to read that opacity will be monitored weekly on a see/no see basis to be consistent with Appendix A.*** Section 5.2.2.6 states that the facility will conduct opacity observations from the baghouse stack and will be recorded once each month. See General Comment 4.

Response

The requested modification has been made.

11. Recordkeeping: ***P4 requests Section 5.2.2.6 be modified to state, "the maximum hourly throughput of the process."*** Section 5.2.2.6.a states that the facility must maintain records of the hourly throughput of the process. See General Comment 3.

Response

The requirement was not changed. The source test approval letter states that "the maximum production rate based on Section F of PTC #029-00001 is 116 T/hr." Therefore, the permittee must monitor the hourly throughput to demonstrate compliance.

Emissions Point 4 – 105 Baghouse

12. Emission Unit Description: ***In an effort to ensure accuracy, P4 requests the emissions unit description be modified to read, "Emissions from the transfer associated with moving coke from belt 835 to belt 105, transfer of coke from the 105 vibrating feeder to the 105 belt, quartzite from belt 835 to belt Q1, and quartzite from belt Q1 to belt Q2 are vented to baghouse 105. Dust collected in the baghouse is stockpiled via the vacuum truck."***

Response

The requested emissions unit description has been included in the technical analysis.

13. Applicability: ***P4 requests Section 5.4.2.1 be amended to reflect the process weight rate for this unit is calculated based on 150 tons per hour with a limit of 33.7 pounds per hour.*** In Section 5.4.2.1, the process weight rate calculations are based on the coke fines feed rate of 30 tons per hour listed in the application. Using 30 tons per hour, the calculated emissions limit would be approximately 21.8 pounds per hour. However, besides coke fines, coke and quartzite are collected by the 105 baghouse. The design maximum feed rate for coke is 120 tons per hour and the design maximum feed rate for quartzite is 150 tons per hour. Thus, the true process weight rate under the worst-case design maximum would be 33.7 pounds per hour.

Response

The change has been made.

14. Monitoring: ***P4 requests Section 5.4.2.3 be modified to read, "The maximum hourly throughput of the process."*** Section 5.4.2.3.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

The requirement was not changed. The permit requires a source test be conducted on baghouse. General Provision F of the PTC limits the maximum allowable operating rate to 120% of the average operating rate attained during any performance test period. Therefore the permittee is required to monitor the hourly throughput of the process to demonstrate that the maximum allowable operating rate is not exceeded.

15. Monitoring: ***P4 requests Section 5.4.2.3 be modified to read that opacity will be monitored weekly on a see/no see basis to be consistent with Appendix A.*** Section 5.4.2.3 states that opacity will be monitored once each month. See General Comment 4.

Response

The change has been made.

16. Monitoring: ***P4 requests the Section 5.5.2.3.b of the tech memo be modified to state the "The calculated annual emissions..."*** Section 5.5.2.3.b states that the permittee is required to monitor the calculated ***hourly*** emissions from the process using allowable hourly emissions, unless actual emission data is available. However the Draft Permit requires the monitoring of the calculated ***annual*** emissions. See General Comment 4.

Response

The change has been made. Section 5.5.2.3.b now reads, "The calculated annual emissions from the process using allowable hourly emissions, unless actual emission data is available..."

Emissions Point 5 – Coke Bunker Baghouse

17. Monitoring: ***P4 requests Section 5.5.2.3 of the tech memo be amended to be consistent with the Draft Permit.*** Section 5.5.2.3 states that opacity will be monitored once each month. The Draft Permit requires weekly see/no see opacity observations, (see Draft Permit Appendix A). See General Comment 4.

Response

The change has been made.

18. Testing: ***P4 requests Section 5.5.3.4 read similar to Section 5.6.3.4.*** Section 5.5.3.4 states that an opacity test must be done if visible emissions are present at the time of the visible emissions inspection. In an effort to be consistent with the Draft Permit and the remainder of the tech memo, the wording for Section 5.5.3.4 should be consistent with wording from Section 5.6.3.4, "If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test." See General Comment 4.

Response

The change has been made.

Emissions Point 6 – Coke-Handling Baghouse

19. Compliance Demonstration: ***P4 requests the first sentence of the second paragraph of Section 5.6.2.2 read, "...if they produce a more stringent lb/hr limit."*** Section 5.6.2.2 second paragraph has two punctuation errors.

Response

The corrections have been made. Pwr was changed to process weight rate.

20. Monitoring: ***P4 requests Section 5.6.2.3 of the tech memo be amended to be consistent with the Draft Permit.*** Section 5.6.2.3 states that opacity will be monitored once each month. The Draft Permit requires weekly see/no see opacity observations, (see Draft Permit Appendix A). See General Comment 4.

Response

The correction has been made.

21. Monitoring: ***P4 requests the tech memo be modified to only include the average hourly throughput of the process as included in Section 5.6.2.3.a and remove the statement that the permittee will monitor the weight of material processed in tons per month since the Draft Permit does not require this monitoring.*** Section 5.6.2.3 states that the permittee is required to monitor the weight of material process in tons per month. However, the Draft Permit Requirement 7.8.1 requires the monitoring of the average hourly throughput of the process. See General Comment 4.

Response

The statement was removed.

22. Monitoring: ***P4 requests the addition of Draft Permit Requirement 7.8.2 in the tech memo.*** Section 5.6.2.3 does not include the Draft Permit Requirement 7.8.2. See General Comment 4.

Response

The requirement was included in the tech memo.

Emissions Point 7 – Bulk Storage Bin Baghouse

23. Emissions Unit Description: ***P4 requests the second sentence of Section 5.7.1 be amended to read "Emissions from the transfer associated with moving coke from the bulk storage bin to the first air conveyor are vented to the baghouse."***

Response

The change has been made.

24. Monitoring: ***P4 requests Section 5.7.2.3 of the tech memo be amended to be consistent with the Draft Permit.*** Section 5.7.2.3 states that opacity will be monitored once each month. The Draft Permit requires weekly see/no see opacity observations, (see Draft Permit Appendix A). See General Comment 4.

Response

The correction has been made.

25. Monitoring: ***P4 requests Section 5.7.2.3 reference be consistent with the correct section of the tech memo, the Bulk Storage Bin Baghouse.*** Section 5.7.2.3 references the dryer baghouse.

Response

The correction has been made.

26. Monitoring: ***P4 requests Section 5.7.2.3.a be modified to read, "The average emissions from the process(es)."*** Section 5.7.2.3.a states the permittee must maintain records of the hourly emissions from the process(es).

Response

Section 5.7.2.3.a was modified to read, "The calculated average hourly emissions from the process." It is consistent with the permit.

Emissions Point 8 – Six Furnace-Feed Bin Baghouses

27. General Comment: ***P4 requests the tech memo reference Emissions Point 8 as bin vents, not baghouses.*** As stated in Comment 29 of the Draft Permit Comments Section, the Six Furnace-Feed Bin Baghouses are actually bin vents not baghouses. This occurs in the Table of contents and on pages 36-38. See General Comment 6.

Response

The name change has been made.

28. Monitoring: ***P4 requests Section 5.8.2.3 be modified to read, "...coke fines bins can be filled up to once per day."*** Section 5.8.2.3 states that the coke fines bins are filled only once or twice per week.

Response

The change has been made.

29. Monitoring: ***P4 requests the tech memo be modified to state that the permittee will check solenoids, air gauge, diaphragm and outlet and replace bags every 3 years or earlier if deemed necessary.*** Section 5.8.2.3 states that pressure drop and plant compressed air pressure will be monitored once each month. P4 requests that these requirements be deleted so the monitoring requirement for these units be consistent with the size of the units, see Draft Permit Comment 30.

Response

The Department has not changed the monitoring and recordkeeping requirements. It is not clear to the Department why the monitoring proposed in comment 30 is more appropriate than the monitoring contained in the draft permit.

30. Monitoring: ***P4 requests Section 5.8.2.3 of the tech memo be amended to be consistent with the Draft Permit.*** Section 5.8.2.3 states that opacity will be monitored every six months. The Draft Permit requires weekly see/no see opacity observations, (see Draft Permit Appendix A). See General Comment 4.

Response

The correction has been made.

31. Monitoring: ***P4 requests Section 5.8.2.3.a be modified to read, "The maximum hourly throughput of the process."*** Section 5.8.2.3.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

Section 5.8.2.3.a says the permittee must maintain records of the calculated hourly **emissions** from the process, not throughput. No change was made.

Emissions Point 9 – Scaleroom Baghouse

32. Monitoring: ***P4 requests Section 5.9.2.4 be modified to read, "The maximum hourly throughput of the process."*** Section 5.9.2.4.a states the permittee must maintain records of the hourly throughput of the process. Since the applicable requirement limits the maximum hourly throughput, monitoring of the maximum throughput on a weekly basis should be sufficient to ensure full compliance with the requirement.

Response

The Department needs to see each hourly throughput to verify that the throughput limit has not been exceeded. No change was made.

Emissions Point 10 – No. 7 CO Baghouse

33. Monitoring: ***P4 requests Section 5.10.2.3.a be modified to read, "The maximum hourly throughput of the process."*** Section 5.10.2.3.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

See response to General Comment 3.

Emissions Point 11 – No. 8 CO Baghouse

34. Monitoring: ***P4 requests this be modified to read, "The maximum hourly throughput of the process."*** Section 5.11.2.3.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

See response to General Comment 3.

35. Reporting: ***P4 requests Section 5.11.2.6 be modified to read, "The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c."*** Section 5.11.2.6 states that the facility is required to submit weekly pressure drop and the plant compressed air readings in biannual reports. See General Comment 4.

Response

The change has been made.

Emissions Point 12 – No. 9 CO Baghouse

36. Monitoring: ***P4 requests Section 5.12.2.3.a be modified to read, "The maximum hourly throughput of the process."*** Section 5.12.2.3.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

See response to General Comment 3.

37. Reporting: ***P4 requests Section 5.12.2.6 be modified to read, "The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c."*** Section 5.12.2.6 states that the facility is required to submit weekly pressure drop and the plant compressed air readings in semiannual reports. See General Comment 4.

Response

The change has been made.

Emissions Point 13 – Main (Furnace) Stocking System Baghouse

38. Monitoring: ***P4 requests this be modified to read, "The maximum hourly throughput of the process."*** Section 5.13.2.3.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

See response to General Comment 3.

39. Reporting: ***P4 requests this section be modified to read, "The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c."*** Section 5.13.2.6 states that the facility is required to submit weekly pressure drop and the plant compressed air readings in semiannual reports. See General Comment 4.

Response

The change has been made.

Emissions Point 14 – Nodule Reclaim Baghouse

40. Emissions Unit Description: ***In an effort to ensure proper documentation, P4 requests the deletion of the extra period at the end of the paragraph.***

Response

The correction has been made.

41. Monitoring: ***P4 requests Section 5.14.2.5.a be modified to read, "The maximum hourly throughput of the process."*** Section 5.14.2.5.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

See response to General Comment 3.

Emissions Point 15 – Separator Discharge Material (SDM) Baghouse

42. General Comment: ***P4 requests all references to the Separator Discharge Material (SDM) Baghouse be named the Separator Discharge Material (SDM) Bin Vents.*** As communicated in Comment 50 in the Draft Permit comments dated January 8, 2002, the SDM Baghouse is not a baghouse, however it is a bin vent. This occurs in the tech memo in the Table of Contents and on pages 51-53. See General Comment 6.

Response

The clarification has been made.

43. Monitoring: ***P4 requests Section 5.15.2.3 of the tech memo be modified to read, "The permittee will monitor the weight of material processed on an maximum hourly basis..."*** Section 5.15.2.3 states that the permittee will monitor the weight of material processed in tons per month, however the Draft Permit Requirement 16.4.1 requires the average hourly throughput of the process. See General Comment 4 and Comment 46 in the Draft Permit Comment Section.

Response

Section 5.15.2.3 has been modified to require recordkeeping of the maximum hourly throughput of the process. The maximum hourly throughput is used to calculate the allowable emission rate using the process weight equations. Permit Condition 16.4.1 has also been changed to the maximum hourly throughput.

Emissions Point 16 – Nodule-Crushing and Screening Scrubber

44. Monitoring: ***P4 requests this be modified to read, "The maximum hourly throughput of the process."*** Section 5.16.2.4.a states the permittee must maintain records of the hourly throughput of the process. See General Comment 3.

Response

The operating permit issued October 23, 2000 requires the permittee to install *and operate* equipment to measure the pounds per hour of material handled throughout the process. Therefore, the permittee must record the pounds per hour processed.

45. Operating Requirements: ***P4 requests that Sections 5.16.2.4 and 5.16.2.6 be modified to require only the monitoring and recordkeeping of the flow rate and remove the monitoring of the pressure drop.*** Requirement 17.4 of the Draft Permit requires the installation, operation, calibration, and maintenance of instrumentation to record the pressure drop across the scrubber. P4 concurs that this is an existing permit requirement. However, the Nodule Crushing and Screening Scrubber is a low-energy type wet scrubber and as long as there is adequate water flow to this scrubber, differential pressure does not have any effect on the performance of the unit and monitoring of pressure drop adds no assurance that the pollution control equipment is operating effectively.

Response

Because the pressure drop requirement is an existing permit condition it remains in the Tier I operating permit.

46. Operating Requirements: ***If Requirement 17.8 remains in the Draft Permit, P4 requests a substantiation of how the monitoring of +20% flow rate is value added considering the higher the flow rate the more efficient the pollution control equipment.*** Requirement 17.8 in the Draft Permit requires pressure drop and

flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate does not appear to be value added due to the higher the flow rate the more efficient the pollution control equipment. Also, the monitoring of pressure drop on this piece of equipment does not ensure that the unit is operating properly, see Comment 41 in the Draft Permit comments.

Response

Requirement 17.8 was modified to read: "The scrubber shall be operated so that the scrubber solution flow rate is maintained above 80% of the solution flow rate recorded during the Department-approved compliance test." See response to General Comment 8. Monitoring of the flowrate can provide an indication of plugged or broken nozzles. A higher flowrate may indicate a broken nozzle. If a nozzle is broken, the proper spray patterns would no longer be achieved and could reduce collection efficiency.

Emissions Point 17 – No. 7 Tap Hole Fume Collector

47. Monitoring: ***P4 requests this be modified to read, "The maximum hourly throughput process weight rate."*** Section 5.17.2.3.a states the permittee must maintain records of the hourly process weight rate.

Response

The permittee must maintain records of the daily average hourly process weight, as required in the permit. The applicable standard is 0.2 pounds of particulate per ton of material fed to the furnace. Therefore, the permittee must know how many tons of material have been fed to the furnace in order to determine the allowable emission rate.

48. Operating Requirements: ***If Requirement 18.5 remains in the Draft Permit, P4 requests a substantial how the monitoring of +20% flow rate is value added considering the higher the flow rate the more efficient the pollution control equipment.*** Requirement 18.5 in the Draft Permit requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate does not appear to be value added due to the higher the flow rate the more efficient the pollution control equipment. Also, the monitoring of pressure drop on this piece of equipment does not ensure that the unit is operating properly, see Comment 58 in the Draft Permit comments.

Response

The requirement to maintain the pressure drop and scrubber solution flow rate within ±20% has been changed to at or above 80% of the Department approved compliance test. See response to permit comment 58.

Emissions Point 18 – No. 8 Tap Hole Fume Collector

49. Monitoring: ***P4 requests Section 5.18.2.3.a be modified to read, "The maximum hourly process weight rate."*** Section 5.18.2.3.a states the permittee must maintain records of the hourly process weight rate.

Response

The permittee must maintain records of the daily average hourly process weight, as required in the permit. The applicable standard is 0.2 pounds of particulate per ton of material fed to the furnace. Therefore, the permittee must know how many tons of material have been fed to the furnace in order to determine the allowable emission rate.

50. Operating Requirements: ***If Requirement 19.5 remains in the Draft Permit, P4 requests a substantial how the monitoring of +20% flow rate is value added considering the higher the flow rate the more efficient the pollution control equipment.*** Requirement 19.5 in the Draft Permit requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate does not appear to be value added due to the higher the flow rate the more efficient the pollution control equipment. Also, the monitoring of pressure drop on this piece of equipment does not ensure that the unit is operating properly, see Comment 61 in the Draft Permit comments.

Response

The requirement to maintain the pressure drop and scrubber solution flow rate within ±20% has been changed to at or above 80% of the Department approved compliance test. See response to permit comment 61.

Emissions Point 19 – No. 9 Tap Hole Fume Collector

51. Monitoring: ***P4 requests Section 5.19.2.3.a be modified to read, "The maximum hourly process weight rate."*** Section 5.19.2.3.a states the permittee must maintain records of the hourly process weight rate.

Response

The permittee must maintain records of the daily average hourly process weight, as required in the permit. The applicable standard is 0.2 pounds of particulate per ton of material fed to the furnace. Therefore, the permittee must know how many tons of material have been fed to the furnace in order to determine the allowable emission rate.

52. Operating Requirements: ***If Requirement 20.5 remains in the Draft Permit, P4 requests a substantial how the monitoring of +20% flow rate is value added considering the higher the flow rate the more efficient the pollution control equipment.*** Requirement 20.5 in the Draft Permit requires pressure drop and flow rate are maintained within +/- 20% of a Department approved compliance test. The +20% of the flow rate does not appear to be value added due to the higher the flow rate the more efficient the pollution control equipment. Also, the monitoring of pressure drop on this piece of equipment does not ensure that the unit is operating properly, see Comment 65 in the Draft Permit comments.

Response

The requirement to maintain the pressure drop and scrubber solution flow rate within ±20% has been changed to at or above 80% of the Department approved compliance test. See response to permit comment 65.

Emissions Point 20 – Phosphorus Storage

53. Emissions Unit Description: ***P4 requests the Emission Unit Description be consistent with the Summary Description in the Draft Permit and state, "The following requirements apply generally to phosphorus storage and loading operations."*** See General Comment 4.

Response

The description has been changed to read, "The following requirements apply generally to the phosphorus storage and loading operations, which includes the phosphorus loading leg and phosphorus loading sump."

54. Compliance Demonstration Method: ***P4 requests a weekly monitoring requirement for a see/no see opacity observation for the CO phos trap, similar to see/no see requirements throughout the permit.*** Section 5.20.2.2 states that all seal pots are controlled by the #9 THFC system with the #7 THFC system as back-up. As communicated in the Draft Permit Comment 67, the CO phos trap is vented to the atmosphere.

Response

A weekly visible emissions inspection has been included for the CO phos trap seal pot.

Emissions Point 21 – No. 7 & No. 8 CO Flare, Emissions Point 22 – No. 9 CO Flare

55. General Comment: ***P4 requests Emission Unit 21 - No. 7 and No. 8 CO Flare and Emissions Unit 22 - No. 9 CO Flare be combined to form the CO Flare System.*** The systems are operated as one at the plant and the permit conditions are applicable to the total amount of refuse (ie. CO) burned, thereby not dependent on individual furnace monitoring. Combining the emission units for this purpose does not affect the current direction of burning the maximum amount of CO in the kiln. The proposed wording for the tech memo is included in Attachment 2. See Draft Permit Comment 75.

Response

The flare emission units have not been combined. See the response to Draft Permit Comment 75.

Insignificant Activities

56. ***P4 requests the lime silo baghouse be added to the insignificant activity list in the Draft Permit.*** As stated in the insignificant activities section of the tech memo, the lime silo baghouse is an insignificant activity.

Response

The lime silo was added to the insignificant activities list.

57. ***Based on the insignificant determination of the vactor truck, P4 requests the removal of the monthly see/no see opacity observation requirement in Appendix A.*** As stated in the insignificant activities section of the tech memo, the vactor truck has been added to the insignificant activity list in the Draft Permit. Insignificant activities should not have monitoring requirements.

Response

Insignificant activities must comply with the generally applicable requirements, such as visible emissions. As stated in Permit Condition 26.1, "There are no additional monitoring, recordkeeping, or reporting requirements for insignificant emissions units or activities beyond those required in the Facility-wide Permit Conditions." Facility-wide Permit Condition 1.8 requires the permittee to conduct periodic inspections of potential sources of visible emissions, which includes some insignificant activities.

Compliance Plan and Compliance Certification

58. Tier II Operating Permit: ***P4 requests the removal of Section 7.9 of the tech memo.*** Section 7.9 requires the facility to obtain a Tier II Operating Permit. See General Comment 2.

Response

See response to General Comment 2.

Attachment 2

Recommended Emission Unit 21 Tech Memo Wording

5.21 Emissions Unit 21 - CO Flare System

5.21.1 Emissions Unit Description

The CO Flare system (consisting of 2 main flare stacks and 2 emergency flare stacks) is the primary emission point of No. 7, 8, and 9 Furnaces. Each furnace has an electrostatic precipitator (treater) and spray tower to control particulate emissions before the furnaces are ducted together. The CO is either burned at the flares or ducted to the kiln to be used as fuel.

In the main process in the Furnace Department, elemental phosphorus is produced in one of three electric arc furnaces (No. 7, No. 8, and No. 9) by a thermal reaction of the furnace feed "burden" (a mixture of quartzite, coke, and calcined phosphate ore). Coke fines are injected into the furnace while all other burden is gravity-fed into the furnaces from the overhead bins through feed chutes. Once in the furnace, the burden reacts to evolve CO and phosphorus gases through the vent riser. The gaseous emissions from the furnace pass through an electrostatic precipitator and a dust knockout chamber to remove particulates. These particulates, also known as treater dust, are transported in pans to an area where they are cooled prior to dumping into a stockpile. The CO gas that is evolved during the furnace process is separated from the phosphorus gas at the furnace gas condenser (spray tower). Once segregated from the phosphorus gas stream, the CO gas is used as a fuel source in the beneficiation process (kiln). Excess CO is burned off by flare. Condensed phosphorus

is collected under water in collection tanks and dumped to the phos-dock, which consists of several storage tanks partially filled with water.

Other byproducts of the furnace process are ferrophosphorus and slag (calcium silicate), which are tapped from the furnaces in the molten state. Ferrophosphorus is cooled in receiving pots while molten slag is dumped on the slag pile and allowed to cool.

Specifications

No. 7 and No. 8 Flare

Stack Height:	44.8 meters
Stack Diameter:	0.61 meters
Estimated annualized composite flow rate:	77.76 cubic meters per second

No. 7 Electrostatic precipitator

Pressure Drop:	0.5 inches of water

No. 7 Spray Tower

Pressure Drop:	2.4 inches of water
Spray Flow Rate:	608 gallons per minute

No. 8 Electrostatic precipitator

Pressure Drop:	0.5 inches of water

No. 8 Spray Tower

Pressure Drop:	2.4 inches of water
Spray Flow Rate:	608 gallons per minute

No. 9 CO Flare

Stack Height:	48.6 meters
Stack Diameter:	0.61 meters
Stack Gas Flow Rate:	55.75 cubic meters per second

No. 9 Electrostatic precipitator

Pressure Drop:	0.5 inches of water

No. 9 Spray Tower

Pressure Drop:	1.9 inches of water
Spray flow:	249 gallons per minute

5.21.2 Permit Requirement – Particulate Matter Standard for Incinerators - [IDAPA 58.01.01.785, 5/1/94] (Permit Condition 21.1)

5.21.2.1 Applicability

The purpose of IDAPA 58.01.01.785 through .788 is to prevent excessive emissions of particulate matter from incinerators. According to the definition of "incinerator" in IDAPA 58.01.01.006.51, the destruction of any combustible liquid or gaseous material by burning in a flare stack shall be considered incineration.

IDAPA 58.01.01.700, Process Weight Limitations, does not apply to a flare because a flare is defined as an incinerator per IDAPA 58.01.01.006.51, not process equipment.

IDAPA 58.01.01.710.08 does not apply to sources subject to the particulate matter emissions standard listed in IDAPA 58.01.01.786.

5.21.2.2 Compliance Demonstration Method

A standard Method 5 particulate test on the flare outlet is not possible due to high temperatures and a lack of stack above the flame. Therefore, particulate matter testing to actually demonstrate compliance with the standard is not possible. Weekly opacity monitoring will be used as a surrogate for monitoring particulate matter emissions. Using the CO flare system design rate, 88,561 lb CO/hr wet basis, this would calculate to a particulate matter limit of 177.15 lb/hr. The design rates were submitted in P_4's comments on the facility draft per flare stack. According to the Corrective Action plan submitted by P_4, the No. 9 flare is rarely used anymore because the excess CO is ducted to the kiln.

5.21.2.3 Monitoring

The permittee must monitor the following parameters:

(a) The average voltage and amperage to the No. 7, No. 8, and No 9. ESP;

(b) The fluid flow rates through the scrubbers,

(c) Scrubber off-gas temperatures;

(d) The average pounds per hour of refuse burned in the flare system;

(e) The average pounds per hour of CO flow to the kiln;

(f) The operation of the phosphorus trap;

(g) The operation of the CO flow monitor; and

(h) The thickness of the CO piping.

Parameters (e) through (h) are from the #9 CO Flare corrective action plan. P_4 suggested monitoring the scrubber off-gas temperature in the comments on the facility draft permit. According to P_4, performance of the precipitators has a very small impact on overall particulate emissions due to the spray tower being the primary step in the process, which reduces phosphorus in the off-gas.

5.21.2.4 Testing

Opacity will be monitored weekly as a surrogate for particulate matter testing. A thermal oxidizer will likely replace the flare system within the next few years as a result of the compliance plan for the No. 7 and No. 8 flare that is included in the permit (Section 25).

5.21.2.5 Recordkeeping

The permittee must maintain records of all required monitoring data.

5.21.3 Permit Requirement – Visible Emissions - [IDAPA 58.01.01.625, 4/5/00] (Permit Condition 21.2)

5.21.3.1 Applicability

The No. 7 and No. 8 CO flare and No. 9 CO Flare are point sources that have exceeded 20% opacity in the past. The permittee has instituted a program to burn more of the CO in the kiln so the flare will operate at a lower load, but the possibility of exceeding the opacity standard still exists.

5.22.3.2 Compliance Demonstration Method

As part of the corrective action plan submitted to demonstrate compliance with the opacity standard, P_4 Production provided some operational procedures and monitoring that will be conducted to ensure a maximum amount of CO is burned in the kiln rather than flared. In an attempt to prevent any restrictions or failures in the CO piping, an annual thickness profile of the CO piping will be completed.

The phosphorus trap is located at the low point of the CO piping and is designed to remove water and phosphorus from the CO gas stream. Improper operation or equipment failures in the traps can cause reduced CO flow. Therefore, a walkthrough of the traps will be conducted every day along with a check of the CO flow meter to the kiln.

5.22.3.3 Monitoring

Once each day, the permittee will monitor the operation of the phosphorus traps and CO flow meter to the kiln. The permittee will monitor the thickness of CO piping annually.

5.22.3.4 Testing

The permittee will conduct an opacity test once each week.

5.22.3.5 Recordkeeping

Once each week, the permittee shall record the results of the opacity test. The permittee must also maintain records of all required monitoring data.

5.22.3.6 Reporting

The permittee shall submit reports of all required monitoring at least every six months in accordance with IDAPA 58.01.01.322.08.c. The reports must be submitted within 60 days of the end of each specified reporting period in accordance with Permit Condition 1.10.

Attachment 1

Recommended Permit Wording for Emission Unit 21

22. EMISSIONS UNIT 21 – CO Flare System

Summary Description

The following requirements apply generally to emissions from the Nos. 7, 8, and 9 furnaces. Each furnace has an electrostatic precipitator (treater) and spray tower to control particulate emissions before the furnaces are ducted together and excess CO is burned in two flare stacks (#7&8 CO Flare and #9 CO Flare). The CO is either burned at the flares or ducted to the kiln to be used as fuel.

Table 22.1 describes the control devices used in controlling emissions from the sources regulated in this section of the permit.

Table 22.1 EMISSIONS UNIT 21 CONTROL DEVICES

Source ID	Emissions unit(s)/Process(es)	Emission Control Device
560.00	No. 7 furnace CO to No. 7 and No. 8 flare	Electrostatic precipitator, spray tower, No. 7 and No. 8 flare
560.10	No. 7 furnace CO to No. 7 emergency CO flare stack	Electrostatic precipitator, spray tower, No. 7 emergency flare
584.00	No. 8 furnace CO to No. 7 and No. 8 flare	Electrostatic precipitator, spray tower, No. 7 and No. 8 flare
584.10	No. 8 furnace CO to No. 8 emergency CO flare stack	Electrostatic precipitator, spray tower, No. 8 emergency flare
608.00	No. 9 furnace CO to No. 9 flare	Electrostatic precipitator, spray tower, No. 9 flare

Table 22.2 contains a summary of the requirements that apply to the furnaces. Specific permit requirements are listed below Table 22.2.

Table 22.2 CO FLARE SYSTEM APPLICABLE REQUIREMENTS SUMMARY

Permit Conditions	Parameter	Permit Limit/ Standard Summary	Applicable Requirements Reference	Monitoring and Recordkeeping Requirements
22.1	Particulate matter	0.2 pounds per one hundred pounds refuse burned	IDAPA 58.01.01.786, 4/5/00	22.4, 22.5
22.2	Visible emissions	20% opacity for no more than three minutes in any 60-minute period	IDAPA 58.01.01.625, 4/5/00	22.3, 22.5, 22.6

Permit Limits/Standards Summary

22.1 No person shall allow, suffer, cause, or permit any incinerator to discharge more than 0.2 pounds of particulate per 100 pounds of refuse burned.

[IDAPA 58.01.01.786.01, 4/5/00]

22.1.1 For the purposes of Permit Condition 22.1, emissions shall be averaged according to the following, whichever is the lesser period of time:

22.1.1.1 One complete cycle of operation; or

22.1.1.2 One hour of operation representing worst-case conditions (design throughput rate) for the emissions of PM.

[IDAPA 58.01.01.786.02, 4/5/00]

22.2 Visible emissions from the No. 7 and No. 8 CO flare and the No. 9 CO Flare, or any other stack, vent, or functionally equivalent opening associated with Emissions Unit 21, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

[IDAPA 58.01.01.625, 4/5/00]

Monitoring and Recordkeeping Requirements

22.3 The permittee shall conduct an opacity test once each week, unless the flare was not used during the week, using the method contained in IDAPA 58.01.01.625.04, during daylight hours and under normal operating conditions. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective actions and report the exceedance in its annual compliance certification and in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each opacity test.

[IDAPA 58.01.01.322.06, .09, 5/1/94]

22.4 Once each week the permittee shall monitor and record the following:

22.4.1 The average voltage and amperage to the electrostatic precipitators.

22.4.2 Fluid flow rates through the spray towers.

22.4.3 Spray tower off-gas temperatures.

[IDAPA 58.01.01.322.06, 5/1/94]

22.5 Once each day the permittee shall monitor and record the operation of the phosphorus trap and operation of the CO flow monitor to the kiln.

[IDAPA 58.01.01.322.06, 5/1/94]

22.5 Once each month, the permittee shall:

22.5.1 Monitor and record the average hourly CO flow, in pounds per hour, to the kiln

22.5.2 Calculate the average pounds per hour or refuse burned in the flare system (including #7&8 flare and #9 flare).

[IDAPA 58.01.01.322.06, 5/1/94]

22.6 Once each year, the permittee shall complete a thickness profile of the CO piping to the kiln.

[IDAPA 58.01.01.322.06, 5/1/94]

22.8 Additional requirements are included in the Compliance Schedule in Permit Condition 25.3.1.23

[IDAPA 58.01.01.322.10, 4/5/00]